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THE UNIVERSITY OF ALBERTA  
PHYSICAL EDUCATION PROGRAMS IN ALBERTA SCHOOLS  
FOR TRAINABLE MENTALLY  
RETARDED CHILDREN

by



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The undersigned certify that they have read,  
and recommend to the Faculty of Graduate Studies for  
acceptance, a thesis entitled "Physical Education  
Programs in Alberta Schools for Trainable Mentally  
Retarded Children," submitted by Brenda R. Botsford  
in partial fulfillment of the requirements for the  
degree of Master of Arts.





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## ABSTRACT

The purpose of this study was to describe the physical education programs in special schools for trainable mentally retarded children in the Province of Alberta, using an instrument developed in the study.

The descriptive instrument was developed by first reviewing relevant literature and making up a list of items mentioned in the literature as important in a physical education program for trainable mentally retarded children. This list was then validated by a jury of Canadians, and items were weighted on a percentile basis.

Eighteen schools in the Province of Alberta were found to include trainable mentally retarded children among their students. Questionnaires based on the jury's final checklist were sent to the principal of each of these schools. Questionnaires were returned by 88.8 percent of the schools.

Since factors such as size, years of operation, school authority, and residential facilities were deemed important in determining the quality of educational programs, statistical treatment was applied to determine if there were significant differences in physical education programs among schools varying within these categories.

It was found that all schools responding included physical education in their curriculums, but that the quality was generally poor compared with standards set by the jury. Schools with more facilities and equipment tended to have





## ABSTRACT (continued)

greater program diversity, but no such relationship was found between teacher training and experience and program diversity. Size appeared to be the most important factor in producing differences between school scores.

It was concluded that the major focus of physical educators in the province should be on special schools with fifty or fewer students. These schools had low scores on almost all items.

A number of recommendations were made, based on the results of the study.



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## CHAPTER I

### STATEMENT OF THE PROBLEM

#### INTRODUCTION

Physical Education is rapidly becoming acknowledged as an integral part of the education of the mentally retarded child, and as such, the physical education profession has a responsibility to maintain the highest possible standards in its programs for the retarded. Much research has been done to determine the actual motor characteristics and abilities of the mentally retarded, and the kinds of programs which best develop their abilities. Solomon (57) believed that retarded children could reach normal motor maturation, and used a program of fitness activities, individual and dual activities, and games to illustrate that a well organized program could bring retarded boys up to the level of normal boys of the same chronological age. Another study by Corder (20), using a program of progressive activities, resulted in significant increases in both motor and intellectual abilities.

Many teachers are sincerely interested in helping their pupils but have inadequate training to develop the kinds of programs needed. Also they may not be familiar with research findings and so will not benefit from the discoveries. Researchers and associations have an obligation to relay new information to teachers and help them apply it.



Adequate facilities are also necessary to implement the new methods and activities suggested. An imaginative teacher can make gymnastic equipment from old tires and ropes, but cannot have a swimming program without access to a pool. These and other similar problems, often unknown to the general public, exist in schools for mentally retarded children, and no advances in programs will occur until specific weaknesses are outlined.

Eyman states that:

Program evaluation is an area of increasing concern among Federal and State officials who are responsible for allocating funds to management and treatment programs for the mentally retarded. (25:435)

Similarly in Canada, private and government agencies are seeking to identify program weaknesses and strengths in order to plan courses of action which will improve education of the mentally retarded. The Canadian Association for the Mentally Retarded<sup>1</sup> in conjunction with Provincial Associations has held several seminars in which teachers and administrators tried to pin-point problem areas in their physical education programs. The C.A.M.R. has also developed a fitness program and test for trainable mentally retarded children, with guidelines for games, dances and aquatics. However, no evaluation of current physical education programs has been undertaken and administered.

Eighteen schools for the trainable mentally retarded

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<sup>1</sup>Formerly the Canadian Association for Retarded Children.



child are operated in the Province of Alberta by a variety of agencies including the Provincial Government, local school boards, and local associations for retarded children. Some schools are residential while others are day schools. Facilities range from multi-classroom self-contained buildings to single rooms. Qualifications and training of teachers vary from school to school. Teachers with grade eleven education are to be found as well as those with Bachelor of Education degrees. It is difficult for one physical education teacher to compare his program with those in other schools, thus observing the strengths and weaknesses of each.

#### STATEMENT OF THE PROBLEM

1. To develop an instrument to determine the status of physical education in schools for trainable mentally retarded children.

2. To describe the physical education programs in special schools for trainable mentally retarded children in the Province of Alberta.

#### SUBSIDIARY PROBLEMS

Comparisons were made to uncover factors determining program quality. The four major comparisons made were as follows:

1. Between independent and government schools.
2. Between small and large schools.
3. Between new and old schools.
4. Between residential and non-residential schools.





## JUSTIFICATION OF THE STUDY

1. The study served as a description of present-day physical education programs in Alberta schools for trainable mentally retarded children.

2. The study provided an objective evaluative instrument which can be used by administrators and teachers in examining their programs.

3. The study provided a method of comparing each school with similar ones in Alberta.

4. The study provided information of use to the Committee for Physical Education in the Alberta Association for Retarded Children.

## DELIMITATIONS

1. The study included only schools for trainable mentally retarded children in the Province of Alberta, in the school year 1969-70. It did not include educational programs for other classifications of mental retardation.

2. The evaluations were based entirely on the questionnaire. No attempt was made to judge the quality of physical education in terms of student achievement and outcomes.

3. The study was descriptive rather than evaluative.

## LIMITATIONS

1. Results of this study were entirely dependent on



the instrument and technique.

2. The inherent problems of obtaining accurate information through a questionnaire were a limiting factor.

3. The results of the study were indicative of those aspects of the programs which were examined. Thus a school with a high score on facilities, personnel, and program activities may still present a poor program because of inadequate teaching methods or lack of interest on the part of the teacher. The evaluation technique used cannot ensure high correlation between the observed program and the actual program quality.

4. The results of the study were indicative only of trainable mentally retarded children's physical education programs in Alberta in the school year 1969-70.

#### DEFINITION OF TERMS

##### Trainable Mentally Retarded Children

Children who functioned intellectually at one quarter to one-half the intellectual level of normal children fell into this category. They can learn self-care duties but will always be somewhat dependent, and seldom marry or live outside their parents' homes or institution as adults. All children up to the age of twenty-one years of age are included in this study.

##### Special Schools

Special schools included those schools privately or



publicly operated for the education of trainable mentally retarded children in the province. They may also have been serving other levels of retardation or emotional and physical handicaps.

### Canadian Jurors

The jurors included university instructors, school board administrators, teachers, and C.A.M.R. representatives working in the field of mental retardation.

### Physical Education Class

Regular instructional classes in gymnastics, fitness activities, games, aquatics, sports, and dance were included in the definition. Regular referred to a specified number of classes per week, every week.

### Facilities

All indoor and outdoor areas used in the physical education program were included here. They were part of the school complex or community properties.

### Intramural Activities

Activities and sports provided for children during and after school hours, and involving only children from the school, were included. Activities were competitive (such as floor hockey), or non-competitive (such as square dancing).

### Extramural Competition

Included were athletic competitions outside of the



physical education class or intramural system. The opponents were staff of the school, children from other schools, (either special or regular schools), or persons from the community. The competition was occasional or regular.

#### Residential Schools

Included were all schools in which a part of the total school population lived in residential facilities at the school.

#### Government Schools

Schools operated by a city school board or the Provincial Government were included.

#### Independent Schools

Schools operated by local branches of the Alberta Association for Retarded Children were designated independent.





## CHAPTER II

### REVIEW OF THE LITERATURE

#### INTRODUCTION

The review of the literature was divided into three main parts; evaluation of physical education programs for the mentally retarded; evaluative instruments for physical education; and physical education programs for trainable mentally retarded children.

#### EVALUATION OF PHYSICAL EDUCATION PROGRAMS

##### FOR THE MENTALLY RETARDED

There have been no surveys of physical education in Canadian schools for the mentally retarded. This section of the review outlines Brace's (11) survey of physical education and recreation in 1968--the first nation wide survey of physical education for retarded children in American public schools (government operated). The study was supported by a grant from the Joseph P. Kennedy Jr. Foundation and approved by the American Association for Health, Physical Education and Recreation. Over one thousand questionnaires were returned from a variety of schools including those enrolling both normal and retarded children, those enrolling only retarded children, those enrolling only educable mentally retarded children, and those enrolling only trainable mentally retarded children.



Areas surveyed were the amount of physical education per week, activities taught, facilities and equipment, policies, intramural and interschool competition, and instructor preparation. No attempt was made to evaluate the schools.

Although the study surveyed all levels of education, only the results of the primary and elementary programs were included here because these were the levels which might include the trainable mentally retarded child. The results of the study were as follows:

1. Primary and elementary students had physical education an average of 3.5 times per week. No mention of the length of the average class period was made.

2. Physical education was not taught in 35 percent of primary schools and 20 percent of elementary schools. Because the majority of retarded children were in the lower grades, Brace concluded that only two thirds of all retarded students were receiving physical education instruction.

3. Bowling on the gym floor or in alleys, basic movements, calisthenics, games designed to teach directions, highly organized games, simple games, musical play and rhythms were taught in more than three quarters of the primary and elementary schools.

Combatives, gymnastic apparatus, racquet sports, swimming, track and field, and winter games were never taught in 40 percent or more primary and elementary schools.

4. Facilities owned by 50 percent or more primary



and elementary schools included: playing field, outdoor basketball court, gymnasium, hard surface outdoor area, and ball diamonds.

More than three quarters of all schools did not have bowling alleys or bowling on the gym floor, campsites, corrective exercise room, handball courts or wall, and swimming pool.

5. Three quarters of all schools had rubber balls in assorted sizes, piano or record player, softballs, and tumbling mats. One half or more also had equipment for tennis, basketball and soccer. One third of the primary and elementary schools had no playground equipment.

6. Approximately 50 percent of all students had annual medical examinations upon returning to school each fall. Physical fitness testing was carried out by 25 percent of the primary schools and 33 percent of the elementary schools.

7. There was a limited interschool program, but normal intramurals were participated in by retarded boys and girls in one third of all schools.

8. While no figures were reported concerning preparation of instructors, 85-95 percent of all instructors agreed that physical education teachers for retarded need professional preparation in mentally retardation, physical education, and recreation.

Several recommendations were made by Brace as a result



of this study.

1. More professional physical education teachers are needed with background study in mental retardation.

2. Colleges and universities should add courses in physical education and recreation for all teachers of special education.

3. All pupils should receive physical education daily.

4. A wider variety of skills should be taught, with swimming being an essential one.

5. More playrooms and gyms should be included in primary and elementary schools.

6. Programs should try to include day or summer camping.

7. There is a need for greater participation in intramurals.

8. There is a need for improved medical services, and physical fitness testing.

#### EVALUATIVE INSTRUMENTS FOR PHYSICAL EDUCATION

No instrument has been developed to evaluate or describe physical education programs for the mentally retarded. Further, only one entirely Canadian instrument has been developed to evaluate physical education for normal children. Nixon's study (45) in 1959, was considered to be a useful method of developing an evaluation and descriptive instrument, and was based on opinions of Canadian specialists in physical





education.

The scorecard developed by Nixon was designed to survey Canadian secondary school physical education programs for students of normal intelligence. His first step was the accumulation of criteria and standards as outlined in the literature. These standards were listed under thirteen major headings:

1. Physical Education Instructional Program
2. Intramural Program
3. Athletic Program
4. Adapted Program
5. Coeducational Program
6. Health Program
7. Health Services
8. Indoor Health Services Areas
9. Indoor Activity and Administration Areas
10. Outdoor Activity Areas
11. Equipment and Materials
12. Instructional Staff
13. Policies and Procedures

A panel of Canadian jurors was then selected, to validate and weight the items. A list was made of prominent personnel working at various levels in the field of health and physical education across Canada.

Those agreeing to act as jurors were mailed the initial list of standards as outlined above, and were asked to rate each item on a scale of zero to ten. They were also



asked to change any items or add new ones and make comments. Items receiving less than a 4.5 average rating were deleted.

A second checklist was then mailed to the jurors, including the suggestions and revisions of the jurors, and items were rated on a zero to ten scale.

The third and final checklist included all accepted items. Each item was given a percentage rating by the jurors, with the total value for all items in an area being 100 percent. Each area was also given a percentage rating so that ratings of the thirteen major areas added up to 100 percent. The percentages were tabulated, and the arithmetic mean scores computed for each area and each item. Each item was then assigned a score out of one thousand points (e.g. Area 1 = 20% and Item 1a = 23;  $.23 \text{ of } 20\% = 4.6/100 \text{ of total, or } 4.6 \times 10 = 46 \text{ points per thousand}$ ).

The scorecard was used on a sample of Saskatchewan schools to demonstrate its use and the analysis of results.

#### THE PHYSICAL EDUCATION PROGRAM

Daniels defined the aim of a physical education program as the provision, "...through competent leadership, (of) a diversified program of developmental activities, games, sports, and rhythms suited to the interests, capacities, and limitations of students..." (21:82)

This section of the review dealt with facilities, and specific activities in physical education programs for retarded children. Since much of the information in the



literature was not clear as to its reference to degree of mental retardation, all was recorded, with appropriate references where available. It has generally been accepted that trainable mentally retarded children differ from higher levels of mental retardation in degree rather than kind.

### Policies

Several policies for physical education programs for the mentally retarded have been stated by the authorities. It was generally agreed that all children of all ages should take part in a regular physical education program. Daniels (21) stated that those with severe physical disabilities should be placed in separate classes, but still take part. Robins and Robins (47) also divided students into homogeneous classes. These groupings were based on age, skill level, mental age and degree of activity, since it was difficult to teach a class including both hyperactive children who need calming down and inactive children who require stimulation. Studies by Cassel (19) and Auxter (3) supported the homogeneous group in that exogenous trainable mentally retarded children proved to be superior in all physical performance to the endogenous trainable mental retardates, and non-brain damaged retardates showed superior strength to that of brain-damaged retardates. The conclusions were that the same motor characteristics cannot be generalized to all types of retardates. Homogeneous grouping would reduce differences in learning speed and potential.



The need for a medical examination for all children each year before commencement of the physical education program was stressed by the Canadian Association for the Mentally Retarded. (15)

In addition to this, Bode (7) and Daniels (21) stated that cumulative medical records should be kept for each student.

Fitness testing was supported by the Canadian Association for the Mentally Retarded and the American Association of Health Physical Education and Recreation because of its value as means of evaluating and determining the physical progress of students. Children should be tested at least twice a year, in order to establish the needs of the children upon entering the program and the progress at the end of the program. Daniels (21) and Bode (7) pointed out the need for continuous evaluation of students, and cumulative records of their physical progress.

Dress for physical education classes was discussed by Robins and Robins (47), the C.A.M.R. (14) and Daniels (21). Both children and staff should be dressed to allow freedom of movement. Suggestions were shorts or slacks, and soft-soled shoes, running shoes or barefeet.

Instructional time for physical education was one of the most important policies discussed, although no agreement was found among the authorities. Researchers (Baumeister and Berry :4) have found that distributed practise was of greater value to retardates than massed practise, implying that it was





important to have shorter daily periods rather than one long period per week. Robins and Robins (47) have suggested a minimum of one hour per week of instruction, with several practise periods at home or in the dormitory. The Canadian Association of Mental Retardation (15) stated that a minimum of thirty minutes of instruction per day is required, and "If this time is reduced, benefits to the children will be proportionately reduced." (15:3) In order to have this thirty minutes of instruction, a minimum of forty-five minutes would be required to allow for changing and showering. Bode (7) noted that all children at the Texas State School for Trainable Mental Retardates received forty minutes of physical instruction five days a week.

#### Instructional Staff

There appears to be a growing belief that teachers of mentally retarded children require professional preparation as do all teachers of normal children. The American Association of Health Physical Education and Recreation (21) has suggested that all physical education teachers of the mentally retarded should have an under-graduate degree in physical education including courses in adapted physical education and anatomy, kinesiology, psychology, and first aid. Clarke and Elkins (21) have stated that special training at the graduate level should be required for those going to teach physical education in special schools or hospitals. This concurred with the Texas State School (7)



where all regular instructors had university degrees in physical education or adapted physical education, or were finishing their degrees.

With regard to student teaching, the American Association for Health Physical Education and Recreation (52) has recommended that all physical education teachers have field work in schools for retarded children before teaching on a permanent basis.

In order to gain better student-teacher ratios, several authorities have suggested the use of trained volunteers to assist regular staff. Bode (7) noted the value of the additional personnel in reducing teacher-pupil ratios.

With regard to continued training of staff, Bode (7) outlined the in-service training at her school, stating that two weeks of in-service training for instructors were held every four months. Program and staff were evaluated each week, and weaknesses were diagnosed.

#### Instructional Program

Authorities have outlined general procedures, and activities of value in the instructional program. The subject of pupil-teacher ratios was discussed by Bode (7), who noted that ideal ratios varied from 8:1 in the early stages of the physical education program to 12:1 or 14:1 in the later stages. Clayson (17) emphasized the importance of a reduced pupil-teacher ratio in swimming in order to ensure



maximum safety and learning. More specifically Sengstock and Stein (52) have stated that the pupil-teacher ratio in swimming should be three or four students per instructor.

That a physical education program for retardates should be based upon current research findings was noted by all authorities. It was stressed that research would be of no value if programs were not continually added to or changed in accordance with the findings. Opportunities for student leadership and selection of activities in class were suggested by Robins and Robins, (47) who felt that children would retain material if they in turn taught their parents what they had learned. Thus, the children would have at least one instructional class per week at school, and several practise classes at home where they would review the lesson by teaching others. It was also suggested that some improvisation should be included in every class.

The use of problem-solving and creative approaches to physical education was suggested as important in developing self confidence and leadership skills. The Canadian Association for the Mentally Retarded stated that physical education teachers should "...encourage children to discover principles and concepts." (15:3) In a section on teaching procedures, it was suggested that:

In order to help the children learn, the teacher must provide situations in which the children make discoveries...rather than simply being a director or a person who demonstrates." (15:3)

Oliver (60) has stated that the instructor must try to



challenge the child to make the next move himself--to experiment--and then show what he has found to the rest of the class. The retarded child should be motivated to be an innovator and not just a follower.

Robins and Robins (47), stressed that the curriculum should build on skills learned in prior years. In their experience, trainable mentally retarded children remembered skills learned before the seven-week summer holiday well enough to continue with new skills when the fall term began. This was substantiated by studies in retention powers of retarded children. Johnson (34) compared the retention of a serial verbal learning task by educable mentally retarded children and normal children of the same mental age, concluding that retarded children function close to the equivalent mental age in normals with respect to long term memory. Baumeister and Berry (4) found similar results, using motor performance, thus supporting the idea of continuous physical education programs.

Material rewards have been suggested as useful motivators in learning. Robins and Robins (47) suggested the use of candy, or stars on a chart as concrete proof of the child's progress. Paper (46) demonstrated the value of material motivation with a tumbling team of educable mentally retarded. All members were given special sweatshirts signifying their participation on the team. The children were required to work hard in their academic subjects and in tumbling practices to remain on the team and keep their





sweatshirts. The team proved successful and a waiting list resulted of students wanting to participate. Other successful motivators included crests and badges for achieving certain levels of fitness such as those used in the A.A.H.P.E.R. or C.A.M.R. fitness programs, or in the research program undertaken by Lawhorne (38).

The necessity of vigorous activity was stressed by the C.A.M.R. (15). It suggested the inclusion of some vigorous activity in every class. The need was substantiated by research done by Brown (12) using the Kraus-Weber Fitness Test on trainable mentally retarded children. He found that retarded children were nearly normal in flexibility, but seriously deficient in strength. Since this was a test of the minimum fitness needed for daily living, Brown suggested that a good physical education program with much activity was necessary if retarded children were to become self-sufficient or even partially self-sufficient adults.

Both individual and group activities have been suggested as important in the overall development of the trainable mental retardate. The Canadian Association for the Mentally Retarded (15) stated that some group activity should be included in every class, preceded by individual work in control, awareness, and skills. Swimming was considered by the C.A.M.R. to be important in providing self-competition as well as group competition. Shriver (54), Stein (59), Hunt (31), and Bode (7) suggested that competition should be included in class activities to promote self-confidence and group



interaction. However, they noted that extreme stress on competition could lead to frustration for these children.

Specific programs of activities have been adopted by agencies for retarded children in both the United States and Canada, based on objectives set up by the organizations. The most commonly agreed upon objectives were:

1. mental stimulation,
2. development of creativity,
3. social development,
4. release of tension,
5. reduction of expectancy of failure,
6. development of recreational skills,
- 7, development of minimum fitness for healthy living,
- 8, development of physical skills useful in the future (1, 16, 17, 58, 60).

Most programs have included basic skills such as walking, jumping, skipping, leaping, and climbing since retarded children do not learn these naturally. Jenny (32) stressed the need for activities developing grasping and locomotor movements, such as using balls and ropes, and much running and climbing. Bode (7) stated that the fundamental principle of the program at the State School in Texas was that trainable children are very similar to normal very young children in their interests and movements. After teaching the basic skills to them, recreational skills were included such as hiking and swimming.

Stein (58) suggested that simple motor skills be



learned first and competitive or recreational ones be learned later. In his program for retardates he included gymnastics; individual activities such as track and field; group games such as relays and dodgeball; team sport lead-ups; fitness and posture exercises; rhythmic; and aquatics. Benoit (60) added climbing games and weight lifting (for boys) to most of the above mentioned items, and Daniels (21) added camping and hiking to the program.

The Canadian Association for the Mentally Retarded Centennial Program (15) included guidelines for games, agility skills, and rhythmic activities. Swimming, skating, and hiking were encouraged, but were not to replace the suggested activities in the regular instructional period. Activities were to be out-of-doors as much as possible.

Robins and Robins (47) designed a physical education comprised entirely of rhythmic. This program was suggested for any retarded child with a mental age of three years or more. Included was a technique section in which locomotor skills and body movements such as stretching, jumping, and muscular coordination were learned; a synco-pated-coordination section in which feet and hands learned to keep time together; a section involving simple dances; and a section of everyday activities such as combing hair and brushing teeth done to music.

Investigations into the effects upon retardates of the types of activities found in the above mentioned programs have been very encouraging. Studies done by Carroll and



Abshier (60), Corder (20), Lawhorne (38), Lillie (39) Luckley and others (41), Shotick and Thate (53), and Solomon and Pangle (57) resulted in discoveries that significant improvements in motor performance, intelligence level, emotional stability, and social awareness had occurred, although not every improvement appeared in every study.

### Facilities and Equipment

Few definite guide-lines have been outlined with regard to facilities and equipment necessary for successful physical education programs for the trainable mentally retarded. Most authorities suggested use of the teacher's imagination to make up for deficiencies in facilities or equipment.

Both A.A.H.P.E.R. (60) and C.A.M.R. (15) felt that a swimming pool and gymnasium were necessary indoor facilities. The C.A.M.R. also suggested showers were important for hygienic reasons. Indoor facilities at the Texas State School for Trainable Mental Retardates included a swimming pool and a playroom. Most of the program was held out-of-doors because of warm climate (7). Outdoor facilities at the school included climbing and sliding apparatus, large obstacle courses, sand pits, a running track, a playing field, and a wading pool. All equipment was reported to be colorful and designed to stimulate the children's imaginations. No outdoor facilities were outlined by other sources.

Equipment was included depending on the program content. The Canadian Association for the Mentally Retarded (15)





suggested a comprehensive list including one tumbling mat per two children, one seven-inch rubber ball per child, one hoop per child, one skipping rope per child, balance benches, balance boards, horizontal and vertical ladders, fitness equipment, brooms, tires, and boxes. A.A.H.P.E.R. (60) included large balls, bean bags, tumbling mats, jungle gym and horizontal ladders, weights for weight lifting, punching bags, ropes, and wooden shoes for lacing and tying. Jenny (32) added bats, parallel bars, and bicycles to the above list.

#### Intramural and Extramural Programs

Daniels (21) pointed out that the physical education program for the retarded should cover the general scope of normal physical education--service program, intramural program, and the interschool program. Brace (11) supported this view regarding intramural programs, and recommended greater participation of retardates in intramurals.

In support of interschool competition for trainable mentally retarded children, the C.A.M.R. decided to participate in a Canadian Special Olympics similar to the one in the United States (13). It was further suggested that all older retarded boys should participate in interschool floor hockey leagues within the provinces.

A recent development in Alberta was the 1970 competitions in bowling, swimming, track and field, and floor hockey at Calgary, sponsored by the Alberta Association.



All schools for retarded children were invited to enter teams and 350 trainable retarded boys and girls participated in the program.

An opposing view was held by Hunt (31) regarding inter-school competitions. She stressed that trainable retardates rarely work in groups well enough to play team sports. However, "...under good leadership, institutional teams of educable retardates can play with normal teams." (31:237)

### SUMMARY

Although there have been no surveys of physical education programs in schools for trainable mentally retarded children in Canada, a study was done in the United States by Brace in 1968. He surveyed physical education programs for all classifications of mental retardation in public schools (government operated). Major findings of this study were a lack of facilities, an inadequate amount of physical education instruction, and a lack of variety of skills taught within the programs. Brace recommended daily physical education classes, professional preparation of teachers, more facilities, improved medical services and fitness testing, greater participation in intramurals, and the inclusion of a wider variety of skills, especially swimming.

In order to develop a Canadian evaluative instrument for determining the status of Physical Education in regular secondary schools, Nixon listed standards found in the literature and selected a group of Canadian specialists to



validate and weight them. This method was also of value in developing evaluation instruments for other types of schools and allows inclusion of a Canadian point of view in the scorecard.

Although many standards were found in the literature concerning physical education programs for the retarded, not all received general agreement. It was agreed that all children should receive physical education instruction, and that classes should be homogeneous groupings of students. No agreement was found concerning the amount of Physical Education necessary. Fitness testing was generally supported. It was agreed that dress for classes should allow freedom of movement. Specific suggestions were made as to type of footwear and gym clothing.

Professional preparation of instructors appeared to be important to several authorities, and volunteers were suggested as useful aids in reducing pupil-teacher ratios.

All authorities stressed the importance of basing programs on current research findings. The inclusion of improvisation and problem-solving situations was generally supported, as was use of material rewards as motivators. No agreement could be found as to the best kind of motivation. While there was no general agreement as to building skills on material learned in former years, research supported the view that retardates have the ability to remember and thus build up skill level. It was agreed that vigorous activities, individual activities, and group activities should be included



in each class. However, competition was not to be stressed.

Specific programs included by most authorities included basic skills, recreational skills, swimming, gymnastics, dance and rhythmic, fitness exercises, and group games. These activities were supported by research findings.

Although few authorities outlined standards for facilities, most agreed that a gymnasium or playroom and a playing field were necessary. Access to a swimming pool was considered important. Equipment included balls of various sizes, tumbling mats, ropes, and climbing apparatus.

It was generally agreed that competition outside the instructional program was desirable, but the amount of competition was not clear. Support for both intramural and extramural competition appeared to be evident.

Other standards noted by individuals did not have general support.





## CHAPTER III

### METHODS AND PROCEDURE

#### DEVELOPMENT OF THE EVALUATIVE INSTRUMENT

Nixon has stated:

In order to determine present accomplishments and to evaluate the methods employed in any Canadian....physical education program, it is first essential to determine suitable standards for such programs and then compare present practices to those standards. In order that such program evaluation be pragmatic and realistic, the necessity is attenuated for the employment of an accurate measuring device which is both valid and objective." (45:1)

Because no standardized evaluative instrument existed to evaluate physical education programs for trainable mentally retarded children, a method developed to evaluate regular physical education programs was adapted for this study. The technique chosen was based on the one designed by Nixon (45) in 1959. The technique involved a review of relevant literature to discover basic standards, followed by application of Canadian opinion to these standards.

The evaluative instrument developed for trainable mentally retarded children was designed in a similar manner. A preliminary checklist was developed from a review of literature in the area of physical education for trainable mentally retarded children. The standards were divided into nine major areas, comparable to the areas surveyed by Brace (11):



policies and procedures, instructional staff, instructional program, indoor facilities, outdoor facilities, equipment and materials, intramural program, extramural program, and health education. Although not included in Brace's survey, health education was mentioned by several writers in the review of literature (Daniels: 21, A.A.P.H.E.R.:60).

A jury of twenty-five persons from across Canada was then selected, based on position firstly and geographic location secondly. The positions represented were:

1. University instructors in the areas of adapted physical education for retarded children and special education for retarded children.

2. School board administrators involved in the education of trainable mentally retarded children.

3. Physical education teachers of trainable mentally retarded children.

4. Representatives of the recreation and physical education committees of the Canadian Association for the Mentally Retarded.

It was assumed that the jurors would represent the variety of persons in the field of physical education for mentally retarded children. Table 1 indicates the number of jurors representing each position. Slightly more than one-half of the jurors were university instructors, in order to have some theoretical basis.

Tentative jurors were sent an outline of the study together with instructions, the first checklist, and a



Table 1

Positions and Geographic Locations of  
the Original Twenty-five  
Jurors Selected

Position	Number of Western Jurors	Number of Eastern Jurors	Total
University instructor of special education or adapted P.E.	5	9	14
School board administrator	1	2	3
Physical education teacher	4	2	6
C.A.M.R. represen- tative	0	2	2
Total	10	15	25



stamped self-addressed envelope. This checklist was completed and returned by fourteen jurors. Eight other prospective jurors indicated they could not participate in the study, or returned the checklist more than two months later and could not be included in the study. The positions and geographic locations of the fourteen participating jurors appear in Table 2. One-half of the participating jurors were university instructors. Regional representation was evenly distributed with seven jurors from Eastern Canada (Maritimes, Ontario, Quebec) and seven from Western Canada (Prairies and British Columbia).

The second checklist included all accepted items plus all revisions. Several rejected items were included again in revised form to be rated. Several major changes were made in the second checklist. The items within health education were rejected so it was deleted as an area. Jurors also suggested the inclusion of a new area--instructional program procedures--separate from policies. The rating scale was also revised. Negative items were added to checklist number two, and consisted of those items with a rating of 1.0 or less. This checklist was returned by thirteen jurors.

The third checklist was comprised of all accepted items plus several revised items. It was mailed to the thirteen jurors with instructions to rate each item on a percentile basis so that items within an area added up to 100%. The jury was also asked to rate each area on a





Table 2

Positions and Geographic Locations of the  
Fourteen Participating Jurors

Name	Position	Location
Dr. P. Austin	University instructor	West
Mrs. June Braaten	C.A.M.R. representative	East
Mr. R. Brien	School board admin.	East
J. Charteris	University instructor	East
Miss Pauline Cunningham	Teacher	East
Miss Wendy Dahlgren	University instructor	West
Mr. Boris Fyk	Teacher	West
Mr. Lloyd Harmel	Teacher	West
Mr. K. McKenna	School board admin.	West
Dr. S. Perkins	University instructor	West
Mrs. K.J. Reid	C.A.M.R. representative	East
Dr. B. Thompson	University instructor	East
Miss Ann Tilley	University instructor	West
R. Van Der Merve	University instructor	East



percentile basis. Items were to be rated separately on a percentile basis. Items with two or more parts were delineated as "OR" items or "LIST" items.

"OR" items required the juror to give the overall item a percentile rating and then weight the choices within the item.

"LIST" items required the juror to give the overall item a percentile rating and then give the sub-items ratings which added up to the total score for the item.

The third checklist was returned by eleven jurors.

The percentile ratings for each item and each area were then averaged to find the arithmetic means for each and were rounded off for easier scoring. Unlike Nixon's study, scores were left in percentile ratings on an area basis. Jurors were asked to rate area headings so that the importance attributed to each part of the program could be found. A reliability test was applied to the Jurors' ratings of the major areas to find agreement in ratings. Several items within the third checklist were clarified, and part scores assigned where two parts made up an item. Because Item 1c was not applicable to all schools, its score was added to 1a in evaluation of those schools. Negative items were deleted from the evaluation due to the large number of jurors not rating them in the third checklist. All correspondence plus the three checklists and questionnaires are included in the Appendix. A talley of the ratings given to each item and area is included.



The school questionnaire mailed to the schools was made up of questions designed to give the required information based on the third checklist, plus general information regarding the school. The main areas were: nature of the school, description of children attending school, physical education personnel, facilities and equipment, instructional program, intramural program, extramural program, and general comments.

The questionnaire was then used in a pilot project at Robin Hood School, and further clarification of questions was made.

#### Duration of the Study

The questionnaire was developed during the summer and fall of 1969, and used to evaluate Alberta programs in April and May of 1970.

#### Collection of the Data

A list of the eighteen schools serving trainable retarded children in Alberta was obtained from the Alberta Association for the Mentally Retarded. (See Table 3) A questionnaire was sent to each school principal with an explanatory letter describing the project and asking his assistance. A stamped, self-addressed envelope was included for the return of each questionnaire. In order to secure a high return of questionnaires, a follow-up letter was sent to schools who had not responded after three weeks. Those



Table 3

Name and Location of the  
Eighteen Schools for  
T.M.R. Children

School	Location
Alberta School Hospital	Red Deer
Burgess School for the Mentally Retarded	Camrose
Christine Meikle School	Calgary
Cold Lake School	Grande Center
Dorothy Gooder School	Lethbridge
Emily Follensbee School	Calgary
George P. Vanier School	Medicine Hat
Fort McMurray Day Center	Fort McMurray
Lenora Clarke School	Vermilion
Lynn Lauren School	Wetaskiwin
Muriel Rowe School	Drumheller
New Hope School	St. Paul
The Parkland School	Falher
Peace School of Hope	Grande Prairie
Robin Hood School	Sherwood Park
Dr. R.R. Cairns School	Vegreville
Winnifred Stewart School	Edmonton





not responding after two more weeks were telephoned.

Sixteen schools completed and returned the questionnaire, and one returned it only partially completed. Thus, for the purpose of analysis only the completed questionnaires were used. Three representative schools were visited to check the reliability of the survey instrument, by comparing the writer's evaluation to that reported by the school. The schools visited represented a residential school, a government school, and an independent school.

### Analysis of the Results

The scores of each school were tabulated, and general trends found as to strengths and weaknesses of Alberta programs. Comparisons based on the scores were made in the following areas:

1. Between survey results and jurors' rankings of areas. Rankings were graphed to determine differences.

2. Between scores on instructional program activities and various other parts of the program.

Two hypotheses were stated. Firstly, there is a positive relationship between program activity diversity and amount of facilities and equipment. Secondly, there is a positive relationship between program activity diversity and staff qualifications and preparation. Relationships were determined by graphs. No statistical treatment was used in these areas.

3. Between schools divided by four factors. The



factors were size of school, residential facilities, years of operation, and school authority. Four hypotheses were statistically tested using the Mann-Whitney U Test (Siegel 55:110). Firstly, that schools with more than fifty students had superior programs (as measured by the survey instrument) to those with smaller enrolments. Secondly, that residential schools had better programs than non-residential. Thirdly, that schools more than ten years old had better programs than newer schools. Finally, that government schools had better programs than independent schools.

Each of the nine areas was graphically analyzed to determine differences between item scores.

4. Between combinations of categories, to determine the most important differentiating factor. Comparisons were done graphically. A tabulation of the schools' scores on the questionnaire can be found in the Appendix. Statistical treatment may be found in Appendix A.

### Summary

A descriptive instrument to examine Alberta physical education programs for trainable mentally retarded children was developed with the aid of a Canadian "jury". The questionnaire was refined following a pilot study done at the Robin Hood School.

A list of eighteen schools operated by independent and government agencies was obtained, and questionnaires mailed to each. Representative schools were visited to test the



reliability of the questionnaire.

The data were analyzed and conclusions drawn. Results of the study were sent to the jurors and schools involved.



## CHAPTER IV

### RESULTS

#### RELIABILITY OF THE STUDY

##### Agreement of the Jurors

The amount of agreement of the jurors was measured, using the results of the third and final checklist. The Kendall Coefficient of Concordance Test (Siegel, 55:234) was first used to find agreement in ranking of the major areas. The result was a significant concordance of  $\chi^2 = 41.36$ , (significant at the .01 level) indicating that rankings were related. The agreement indicated that the jurors applied essentially the same standards in ranking the areas.

The amount of agreement of the percentage weightings assigned to the nine major areas of the third checklist was tested using the Odd - Even reliability test and Spearman-Brown formula (Ferguson, 26:378). Correlations appear in Table 4. Areas V, VII and VIII had the greatest agreement while area IV showed almost no agreement. The results indicated that while there was significant agreement in ranking the areas, the absolute percentage values of the areas were unreliable, and not useful in setting up an evaluative instrument with absolute point values for each item. The instrument developed could only be used for





Table 4

Agreement of Jurors on Percentage Weightings  
Assigned to the Nine Major Areas  
of the Final Checklist

Area	r
I Policies	.69
II Instructional Staff	.54
III Procedures	.38
IV Instructional Program Activities	.09
V Indoor Facilities	.90
VI Outdoor Facilities	.28
VII Equipment and Materials	.96
VIII Intramural Program	.87
IX Extramural Program	.52



describing the status of the schools in the nine areas and comparing schools. It was not possible to evaluate the quality of the programs.

#### Reliability of the School Questionnaire

Three schools were selected to determine the reliability of the survey instrument. The schools were representative of the sample of the survey and included one residential school, one independent school, and one government school. In two cases, the person completing the original questionnaire was interviewed, and in the third school, a different person was interviewed. The Spearman-Rank Correlation Test-Retest (Siegel, 55:207) was applied. Significant correlations were found in all three instances (significant at the .05 level) and are listed in Table 5. The few differences between the first and second questionnaire results suggested that the results of the sixteen schools surveyed were reliable.

The statistical treatments for reliability of the study appear in Appendix A.

### GENERAL DESCRIPTION OF ALBERTA PROGRAMS

#### Nature of the Schools

Information was sought concerning the school population, years of operation, residential facilities, and school authority of each school. Table 6 gives a breakdown of the schools.



Table 5

Reliability of the School Questionnaire  
Using Test-Retest Correlations

School	Type	r
1	Independent	.967 <sup>a</sup>
2	Government	.754 <sup>a</sup>
3	Residential	.806 <sup>b</sup>

Table 6

Nature of the Schools

Type of School	Number of Schools	Number of Students	Percent of Students
Residential	2	830	47.4
Non-residential	14	920	52.6
Independent	13	698	39.9
Government	3	1052	60.1
More than Ten Years of Operation	7	1513	86.5
Less than Ten Years of Operation	9	237	13.5

<sup>a</sup>Correlation significant at the .05 level.

<sup>b</sup>Correlation significant at the .01 level.



Approximately 1,750 children were accommodated in the schools at the time of the survey. The three largest schools totaled 1,370 students--more than three-quarters of the total population. (Non-residential independent schools made up the bulk of the sixteen schools in the survey.) Although only two schools had residential facilities, 47.4 percent of the students lived in residence. The schools were nearly equally divided in number with regard to years of operation, but 86.5 percent of the students attended schools which had been operating more than ten years.

### Policies

The area of policies included general concepts of special classes for physically handicapped students, medical examinations, fitness testing, amount of physical instruction, and dress for physical education classes. A summary of policy results appears in Table 7. Fifteen of the sixteen schools had between 81 and 100 percent participation of students in physical education classes. The other school did not have staff to accommodate its pre-school students.

Four schools included non-ambulatory students. Of these schools, two had special classes for the handicapped students, while the other two included them in regular classes. Severe cerebral palsy, wheel chairs, and crutches were reasons given for not including children in regular classes.

Medical examinations were compulsory for all students in 18.8 percent of the schools surveyed. However,





Table 7

## Policies of the Schools

Policy	Number of Schools Having Policy	Percent
81-100% of students participate in physical education	15	93.8
Special classes for non-ambulatory students	2 <sup>a</sup>	50.0
Medical exams for 81-100 percent of students	3	18.8
Medical records kept on each child	5	31.3
Fitness testing twice a year	4	25.0
Fitness testing once a year or more	7	43.7
P.E. progress records kept on each child	13	81.3
P.E. class daily for 45 minutes	0	0
P.E. class daily for any length of time	5	31.3
Running shoes or barefeet worn	12	75.0
Slacks or shorts worn in class	9	56.3

<sup>a</sup>The policy was not applicable in 12 schools.



31.3 percent kept medical records of their students.

Fitness testing was carried out in almost half the schools, and 25 percent of all schools tested students at least twice a year. Cumulative records of the physical progress of each child were kept by 81.3 percent of all schools.

No school provided 45 minutes of physical education instruction daily for its students. The average length of the physical education class period was 26 to 30 minutes. The average number of class periods per week was 3.6. Brace found the average number of periods per week to be 3.5 in the United States.

Dress for Physical Education classes was varied. Children generally wore gym shoes or barefeet, but did not always change into shorts or slacks. Girls in several schools wore slacks to school on Physical Education days, rather than changing into them for the class.

#### Instructional Staff

Information was sought concerning the qualifications, training and type of Physical Education instructors found in the schools. A description appears in Table 8. Fifty-one persons taught physical education to Alberta's trainable mentally retarded children. Physical education was usually taught by female regular classroom teachers. Fourteen schools had female instructors for girls twelve years and over, and three schools had male instructors for boys twelve



Table 8

## Description of Instructional Staff

Description	Full-time P.E. Teacher	Regular Class- room Teacher	Total
Female	11	32	43
Male	7	1	8
University degree in Physical Education	0	1	1
University degree in Education	0	3	3
Department of Education certification	0	11	11
Previous experience in normal schools	0	8	8

Total number of physical education teachers = 51.



years and over.

Four physical education teachers had university degrees or their equivalent, three in Education and one in Physical Education. Other training included university winter and summer school courses, extension courses, special orientation courses at other schools, occupational therapy training, coaching papers from Europe, and swimming courses ie. Royal Life Saving and Red Cross Instructor and National Life Guard.

Eight teachers were reported to have had student teaching experience with retarded children. This is poor when compared to the normal school system in Alberta in which every teacher must have student teaching experience prior to being hired. In-service training for instructors was reported by eight schools.

Slightly more than 1/5 of the physical education teachers had Alberta Department of Education certification, and one had a letter of authority. Eight of the eleven certified teachers were teaching at one school, which required certification.

Part-time untrained staff were hired in one school and volunteers were used in eleven schools. These volunteers included recreation students from the Lethbridge and Mount Royal Junior Colleges, student nurses at the Alberta School Hospital, parents and interested citizens who were good swimmers (for swimming classes), university physical education students, and high school students.





### Instructional Program Procedures

Procedures used in the physical education program included optimum pupil-teacher ratios, coeducational activities, reference materials used, and opportunities for student decisions. A summary of the average pupil-teacher ratios for various activities appears in Table 9. Older children had higher ratios in all activities. Further, swimming classes produced the lowest ratios. The average number of students per class varied between 9 and 12 children.

Classes for children under twelve years were always coeducational in fifteen schools. Older students had coeducational classes in all or most activities in fourteen schools, and were separated for some activities in five schools.

The reference materials used to develop the schools' programs were varied. Table 10 summarizes the findings. The Canadian Association for the Mentally Retarded Centennial Athletic Programme was used in more than 80 percent of the schools. Two schools based their programs entirely on the Programme. Other resource materials included textbooks, fitness records, summer school or extension course handbooks, and the Canadian Red Cross Swimming Manual for handicapped people. Two schools reported developing programs without use of any outside references. Audio-visual aids were used in six schools.



Table 9

Average Pupil-Teacher Ratios in Various  
Physical Education Activities

Activity	Age of Students	Av. Ratio
Games, dance and/or gymnastics	Under twelve	8.9:1
Games, dance and/or gymnastics	Twelve and over	10.7:1
Swimming	Under twelve	5.9:1
Swimming	Twelve and over	8.0:1

Table 10

Reference Materials Used by Schools

Basis for Curriculum	Number of Schools	Percent of Schools
C.A.M.R. Programme only	2	12.5
C.A.M.R. Programme plus others	11	68.8
Textbooks used as references	4	25.0
Other resource materials used	5	31.5
No outside references used	2	12.5



Opportunities for student planning and/or leadership within physical education classes were found often in five schools. Two of these schools included both possibilities. In addition, nine schools offered these opportunities sometimes in the program. Problem-solving situations were often included in five schools.

### Instructional Program Activities

Every activity included in the questionnaire was included in the program of at least one school. Table 11 indicates participation of the schools in the various activities.

In terms of general program content, 75 percent or more schools offered activities within the categories of games, gymnastics and tumbling, dance and rhythmic, swimming, fitness exercises, and basic skills. One or more team sports were included in slightly less than one-half of the programs. Outdoor education in the form of camping and fishing was taught in less than one quarter of the schools, while hiking was included in almost three-quarters of the programs.

The following activities were offered to children under twelve years of age by 75 percent or more of the schools: dance and rhythmic; fitness exercises; group competition; gymnastics and tumbling; individual activities; basic skills of jumping, running, throwing, and walking; and swimming. Less than 25 percent offered young children



Table 11

## Activities Taught in the Schools

Activity	# of Schools (under 12 years)	Percent of Schools	# of Schools (12 years and over)	Percent of Schools <sup>a</sup>
Basic skills	15	93.8	14	93.3
Basketball	2	12.5	5	33.3
Bicycling	7	43.8	4	26.7
Camping overnight	3	18.8	3	20.0
Creative games	9	56.3	7	46.7
Croquet	2	12.5	2	13.3
Dance and rhythmic	13	81.3	12	80.0
Fishing	1	6.3	3	20.0
Fitness exercises	15	93.8	14	93.3
Floor Hockey	5	31.3	7	46.7
Group Competition	13	81.3	13	86.7
Hiking	11	68.8	10	66.7
Gymnastics and tumbling	13	81.3	12	80.0
Ice Hockey	5	31.3	5	33.3
Ice Skating	11	68.8	10	66.7
Individual activities	14	87.5	14	93.3
Officiating	0	0.0	2	13.3
Pair activities	10	62.5	10	66.7
Posture exercises	11	68.8	12	80.0
Relays	10	62.5	11	73.3
Self-competition	7	43.8	7	46.7
Softball	3	18.8	5	33.3
Swimming	12	75.0	11	73.3
Team games	9	56.3	10	66.7
Volleyball	2	12.5	4	26.7
Weight lifting	1	6.3	1	6.7
Wrestling	1	6.3	2	13.3

<sup>a</sup>Only 15 schools had children twelve years and over.





the following activities: basketball, overnight camping, croquet, fishing, officiating, softball, volleyball, weight lifting, and wrestling.

Seventy-five percent or more of the schools offered the following activities to children twelve years and over: dance and rhythmic, fitness exercises, group competition, gymnastics and tumbling, individual activities, basic skills, and posture exercises. Activities included in less than one quarter of the programs for older children were: overnight camping, croquet, fishing, officiating, weight lifting, and wrestling.

Activities not included in the questionnaire but listed by schools were: obstacle courses, tobogganing, curling, and skipping.

Comparing the results to those of Brace's study (11), it can be seen that more Alberta schools included swimming and gymnastics in their programs than did American elementary schools for retarded children.

### Indoor Facilities

Indoor facilities included gymnasiums, teaching stations, shower and locker facilities, and recreational facilities such as pools, bowling alleys and curling rinks. Table 12 shows a summary of the results.

Three-quarters of the schools were found to own a gymnasium or playroom, although only eight schools had a gym large enough to contain a 60' x 30' basketball court. Three



schools had partitions in the gymnasium, or had more than one gym.

Locker rooms and showers were found in 25 percent or less of the schools. Offices for the physical education instructors were also found in less than one quarter of the schools, probably because most physical education teachers were regular classroom teachers and had less need of offices.

Twelve schools included swimming in their programs and generally used community-owned pools. One school had a pool within the school complex.

Community-owned bowling alleys were used by five schools in their programs. One school owned and used its own curling rink. Curling was not included in any other programs.

### Outdoor Facilities

Descriptions of the playing field and playground equipment were the subjects of this area. A summary of facilities used by the schools appears in Table 12.

Three-quarters of the schools had an outdoor playing area, but only half of these had a field large enough for a regulation football field (6,600 sq. yds. or more).

Ten schools had outdoor playground equipment including six schools which had some type of climbing apparatus. Twenty-five percent of the schools reported having permanent or moveable tunnels among their equipment, and one school had a wading pool.

Skating rinks were used by 75 percent of the schools,



Table 12

## Facilities Used in Physical Education Programs

Type	Facility	Number within School	Number in Community
Indoor	Gymnasium or playroom	12	0
	Regular size gym.	8	0
	Two or more teaching stations	3	0
	Swimming pool	1	11
	Showers	4	--
	Locker rooms	2	--
	P.E. teacher's office	3	--
	Bowling alleys	0	5
	Curling rink	1	0
Outdoor	Climbing apparatus	6	--
	Running track	0	--
	Playground	12	--
	Regular size field	6	--
	Skating rink	3	9
	Wading pool	1	--
	Playground equipment	10	--
	Colorful equipment	2	--
	Tennis courts	1	--



although most rinks were owned by the community.

### Equipment and Materials

Equipment used in the physical education classes generally included gymnastic apparatus, equipment for games, and aids for swimming (Table 13). Although 93.8 percent of the schools owned balls, less than 50 percent had one ball per student per class in assorted sizes.

Thirteen of the fifteen schools having bean bags had at least one bag per student per class.

Nine of the thirteen schools owning tumbling mats had at least two feet of mat per student per class.

The most commonly owned pieces of equipment were balls, bean bags, skipping ropes, and tumbling mats. The least used pieces of equipment were target-type equipment, weights for weight lifting, uneven and parallel bars, trampolines, pingminton bats, climbing ropes, and box horses.

Other equipment used for physical education but not included in the questionnaire is listed in Table 14.

### Intramural Program

This area sought information concerning competitive and non-competitive activities participated in only by students of the school. Competitive intramural programs were conducted in seven schools, and are outlined in Table 15. The most popular time for the program appeared to be noon.

Student leadership opportunities were available in slightly more than 50 percent of the schools conducting competitive intramural programs.





Table 13

Equipment and Materials Used in Physical Education  
Classes and Included in  
the Questionnaire

Type of Equipment	# of Schools with Equipment	Percent
Balance beam	10	62.5
Balance bench	8	50.0
Balls	15	93.8
Bean bags	15	93.8
Box horse	3	18.8
Climbing boxes	4	25.0
Climbing ladders	4	25.0
Climbing ropes	3	18.8
Inflatable toys for the pool	4	25.0
Kickboards	8	50.0
Pingminton bats	3	18.8
Skiping ropes	12	75.0
Target-type equipment	0	0.0
Tires	6	37.5
Trampoline	1	6.3
Tumbling mats	13	81.8
Uneven or parallel bars	2	12.5
Weights	1	6.3



Table 14

Equipment Listed by the Schools but not Included  
in the Questionnaire

Type of Equipment	# of Schools with Equip.
Basketballs and hoops	5
Bicycles	7
Blocks	1
Camping equipment	3
Climbing board	1
Croquet equipment	2
Exercise bicycles	2
Floor hockey equipment	7
Footballs	1
Ice hockey equipment	5
Inflatable "Space-Hopper"	1
Mechanic creepers	1
Planks	1
Rocket Rider	1
Short ropes	1
Skateboards	1
Scooters	2
Springhorse	1
Table and chairs	1
Tennis equipment	1
Tetherball	1
Toboggans	1
Track and field apparatus	2
Tricycles	2
Turning bars	1
Volleyballs and nets	4
Wagons	1
Wall bars	1



Table 15

## Description of Intramural Programs

Description	# of Schools
Program both at noon and after school	1
Program at noon only	4
Program after school only	1
Program at the end of the year only	1
Student team captains and officials	3
Student team captains only	1
No leadership opportunities (among those having a competitive program)	3
Coeducational Activities included often	4
Trophies presented to winners	4
Total number of schools with competitive intramural program	7



Coeducational activities were often or always included in four of the seven schools having competitive programs.

A recreational, non-competitive program was offered to students in 75 percent of the schools. It included hiking, skating, rhythmic and rhythm band, dancing, swimming, simple games, action songs, and keep-fit. Supervised "free play" was provided every day in thirteen schools.

### Extramural Program

Included in this section were competitions between students from a school and other persons. Table 16 outlines the various types of competitions included in Alberta programs.

Nine schools reported having one or more extramural competitions. Seven of these competed only with other retarded children. No school competed in regular leagues, but all nine schools included children of all ages in occasional competition.

Swimming, track and field, and floor hockey were the most common activities in which competition was held. Several schools mentioned participation in the Special Games at Calgary but did not outline specific activities competed in with other schools.

### Comments of the Schools

Thirteen schools commented on their programs at the end of the questionnaire. Six noted that swimming was the strongest part of the program. Other activities very





Table 16

## Description of the Extramural Programs

Competition with:	Type of Competition	Age of Students	Activity	# of Schools
Retarded children from other schools	Occasional	6 - 21	Track & Field	4
			Floor Hockey	1
			Swimming	4
			Special games (no act. mentioned)	3
Normal children from other schools	Occasional	6 - 11	Track & Field	1
		12 - 21	Track & Field Floor Hockey	2 1
Adult staff from the school	Occasional	6 - 11	Track & Field Softball	2 1
		12 - 21	Track & Field	2
			Ice Hockey	1
			Floor Hockey Softball	1 1
Adults from the community	Occasional	12 - 21	Floor Hockey	1



successful were creative movement, track and field, gymnastics, games, floor hockey, skating, and outdoor activities. Several schools felt their physical education programs offered a wide variety of skills which developed muscular control and taught the children to play and work together.

The most serious inadequacies of the programs were reported to be staff shortages, lack of staff training, and inadequate facilities and equipment. Lack of space for conducting programs indoors and outdoors, and lack of gymnasium equipment and playground equipment were also mentioned.

The physically handicapped offered particular problems to two schools which included physically handicapped retardates such as the blind, deaf, epileptic, and cerebral palsied among the non-handicapped retarded children. It was felt that a physio-therapist would greatly assist programming for the children.

Specific activities which were not successful were team games (due to small number of children in class), dance, keep-fit, and skating (due to poor facilities). Several schools noted that small enrollment resulted in a shortage of funds to hire trained instructors, and buy needed equipment. However, small enrollment allowed more individual attention in some classes.

#### COMPARISON OF THE SURVEY RESULTS WITH THE JURORS' RANKINGS

A comparison of survey results and jurors' ratings was made to determine possible differences. Figure 1



compares the average ranks given to the areas by the jury with the rank-order of the survey results. It was felt that the schools should rank highest on the areas thought most important by the jurors.

The ranks were similar with the exception of areas II and VIII. Area II (Instructional Staff) received the highest ranking from the jurors, but the third lowest ranking in the survey results. Thus, schools in the study were relatively inadequate in a very important area.

Area VIII (Intramural Program) received a high ranking in the survey compared to that set by the jurors. Relative to the other aspects of the study, the intramural program was of high quality.

Overall, the average percentages for each area were low compared to the maximum possible score of 100 percent for each area. Only in areas I (Policies) and IV (Instructional Program Activities) was more than 50 percent achieved.

#### RELATIONSHIP BETWEEN PROGRAM AND FACILITIES AND EQUIPMENT

It was hypothesized that schools with superior facilities and equipment would also have superior activity programs. When the schools' mean scores were ranked from highest to lowest and then graphed, it was found that only two schools had differences in rank of 5 or more between facilities and equipment, and activity scores. A fairly close relationship can be seen in the graph, supporting the



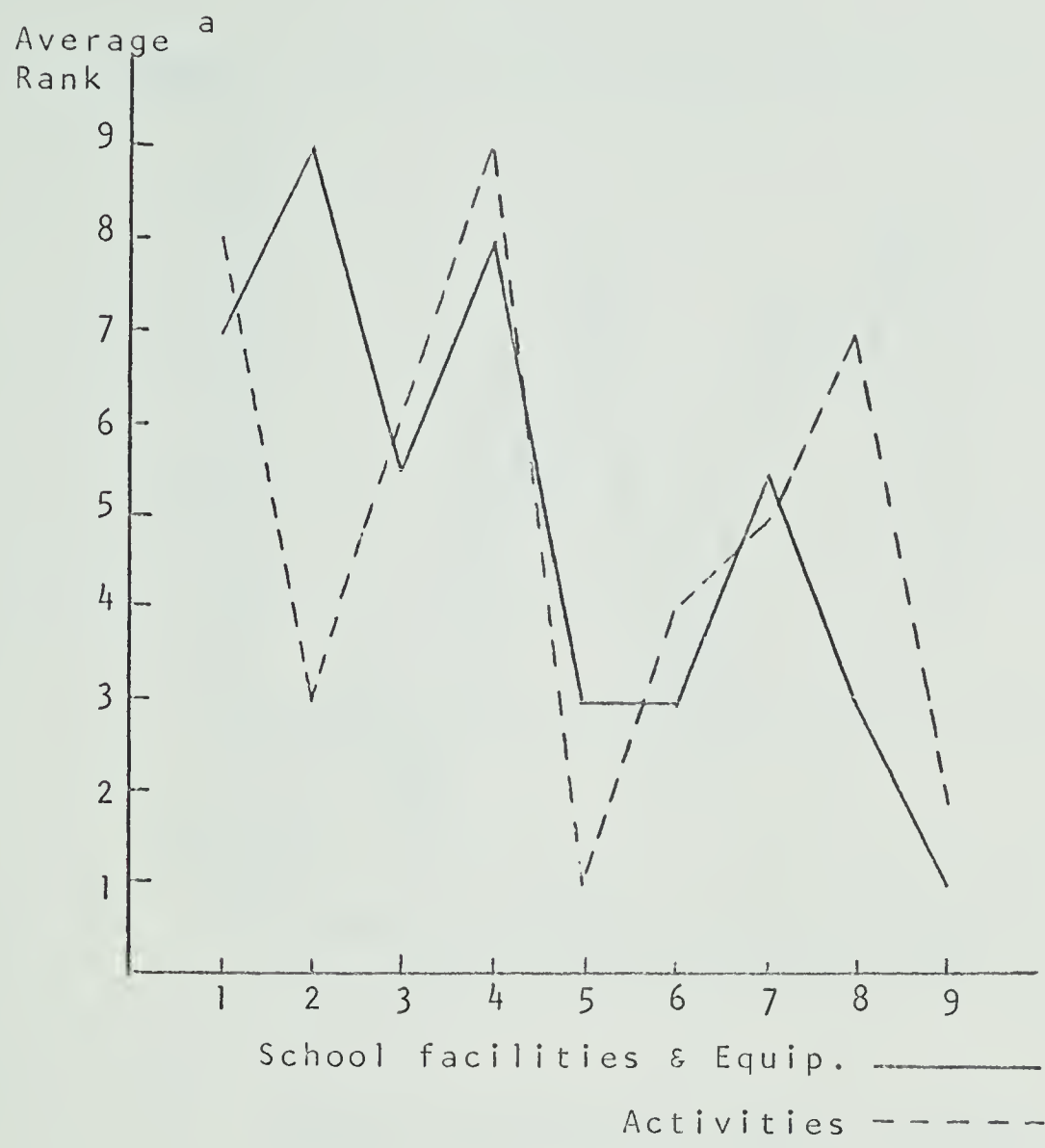


Figure 1

Comparison of Area Results  
with Rankings of Jurors

<sup>a</sup>(1 = the lowest rank)





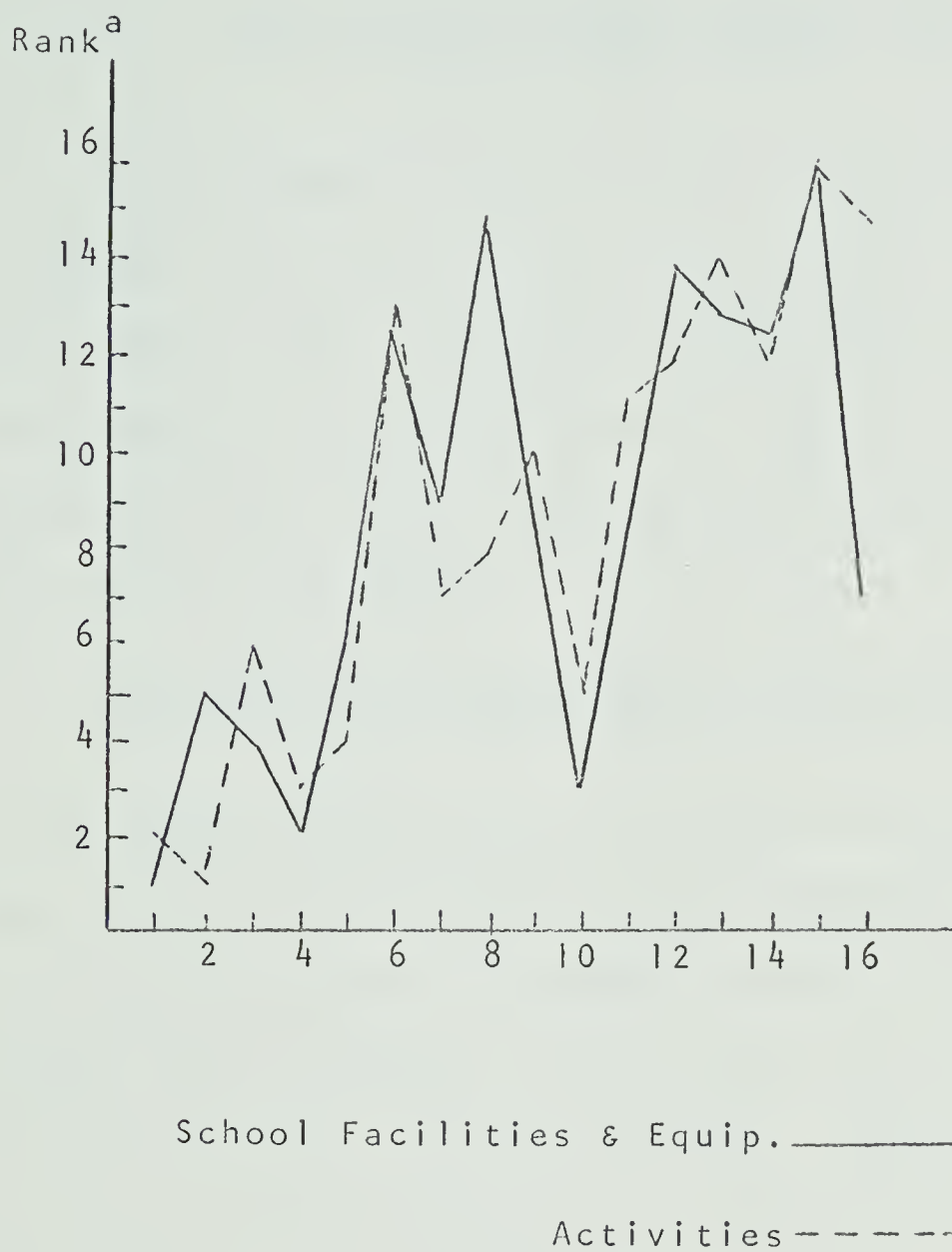


Figure 2  
Relationship of Activities  
And Facilities and Equipment

<sup>a</sup>(1 = school with the lowest score)



hypothesis. (see Figure 2)

#### RELATIONSHIP BETWEEN PROGRAM AND INSTRUCTIONAL STAFF

It was hypothesized that schools with superior scores on instructional staff would also have superior scores on activities. When these scores were ranked and graphed, little or no relationship could be observed. Figure 3 indicates differences of five or more ranks in seven schools. Thus, the hypothesis was not supported.

#### COMPARISON OF SCHOOLS WITHIN CATEGORIES

The sixteen schools were analyzed by breaking them into four categories and comparing the differing schools. Figure 4 shows the number of schools in each category. The Mann-Whitney U Test (Siegel, 55:119) was used to determine significant differences between schools. Table 17 gives a summary of the differences found in each category.

##### Size

Variation in size appeared to be the most significant factor of the four categories. Eleven schools with fifty or fewer students were compared to five schools with more than fifty students. The hypothesis--large schools will receive higher scores than small schools--was supported in five of the nine areas by significant differences of the .05 level or better. (see Table 17)

Figure 5 illustrates the differences found in average



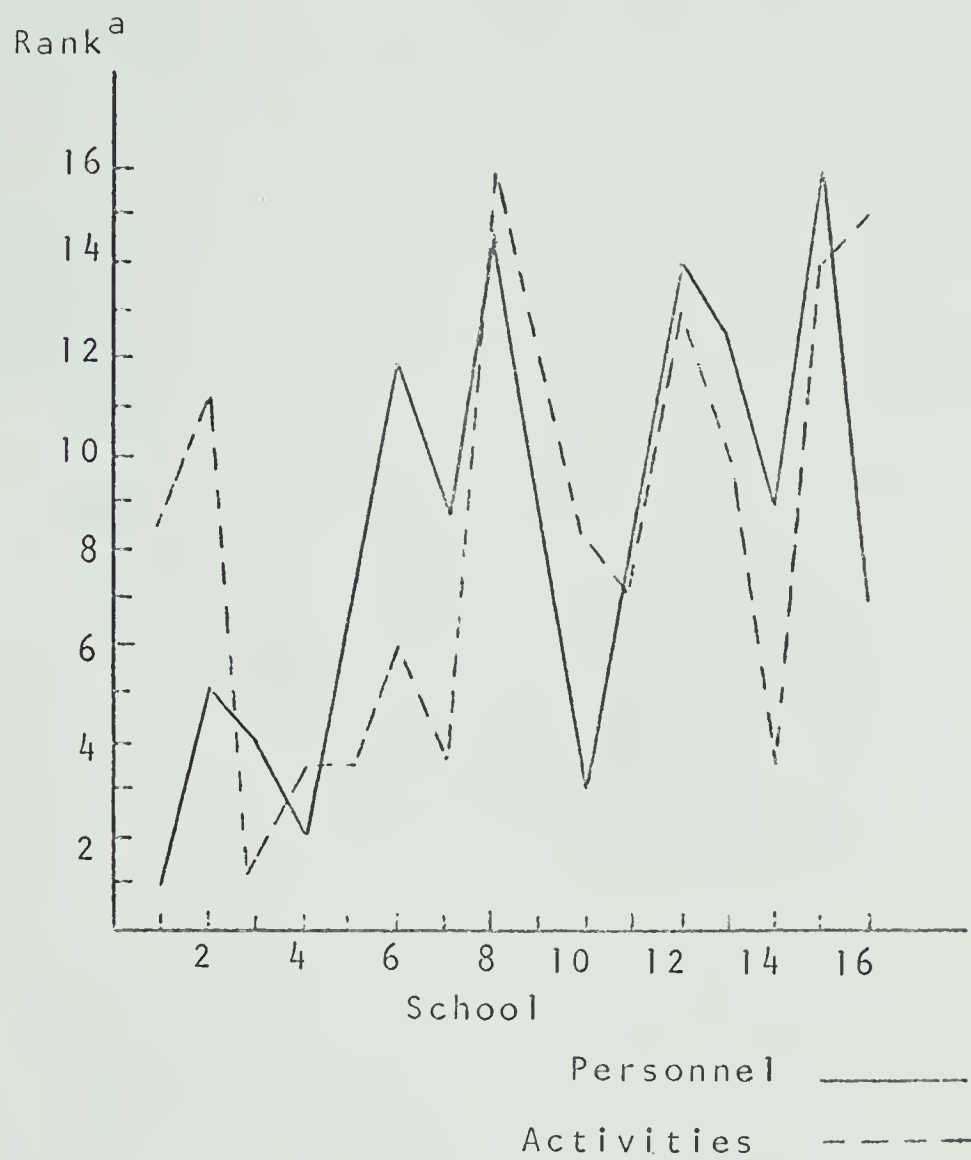


Figure 3  
Relationship of Activities  
and Personnel

<sup>a</sup>(1 = school with the lowest score)



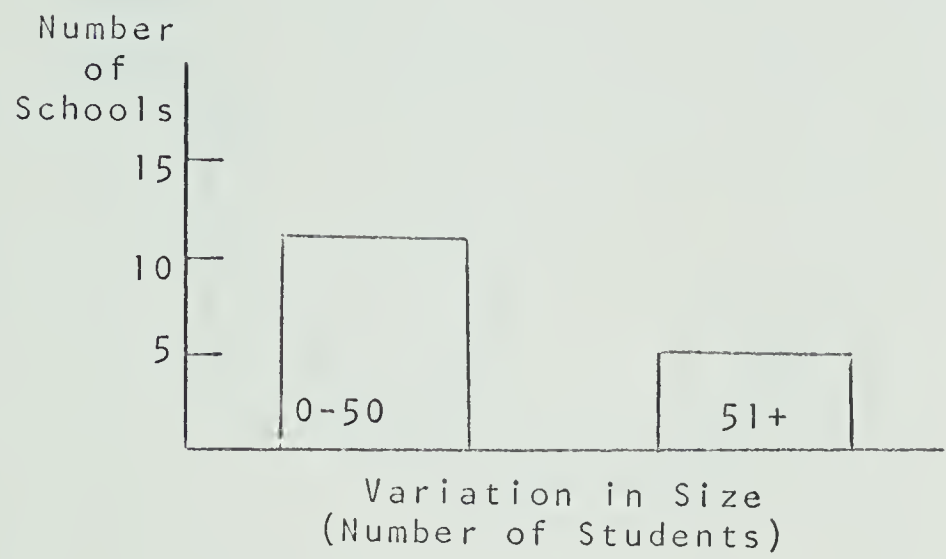


Figure 4

Number of Schools Within  
Each Category





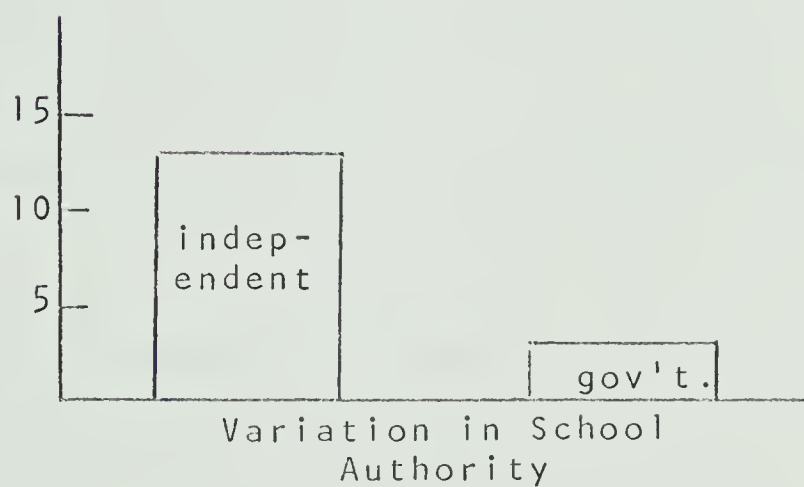
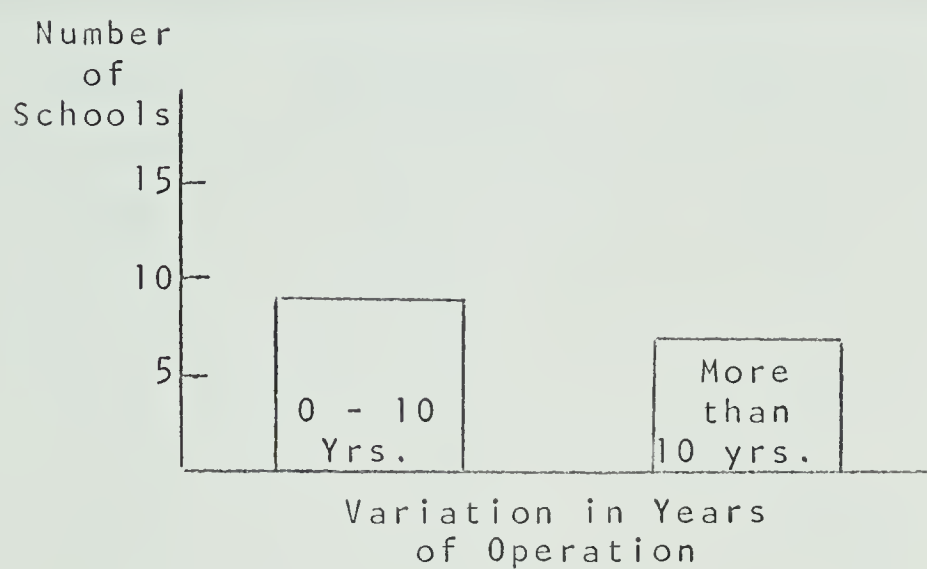


Figure 4 (cont.)

Number of Schools Within  
Each Category



Table 17

Significance of Differences Within the  
Four Categories of Schools  
("U" Scores)

Area	Size	Residential Facilities	Years of Operation	School Authority
I	15.0	9.0	25.0	13.0
II	14.5	4.0	9 <sup>a</sup>	17.5
III	17.0	3.5	25.0	13.5
IV	9.5 <sup>b</sup>	1.0 <sup>b</sup>	19	5.5 <sup>b</sup>
V	6.0 <sup>a</sup>	5.5	10.5 <sup>b</sup>	5.5 <sup>b</sup>
VI	6.0 <sup>a</sup>	4.5	14.5 <sup>b</sup>	5.5 <sup>b</sup>
VII	14.0	1.0 <sup>b</sup>	20.5	18.0
VIII	9.0 <sup>b</sup>	8.0	16.0	4.0 <sup>b</sup>
IX	2.5 <sup>a</sup>	4.0	7.0 <sup>a</sup>	6.5

<sup>a</sup>Significant @ .01 level

<sup>b</sup>Significant @ .05 level



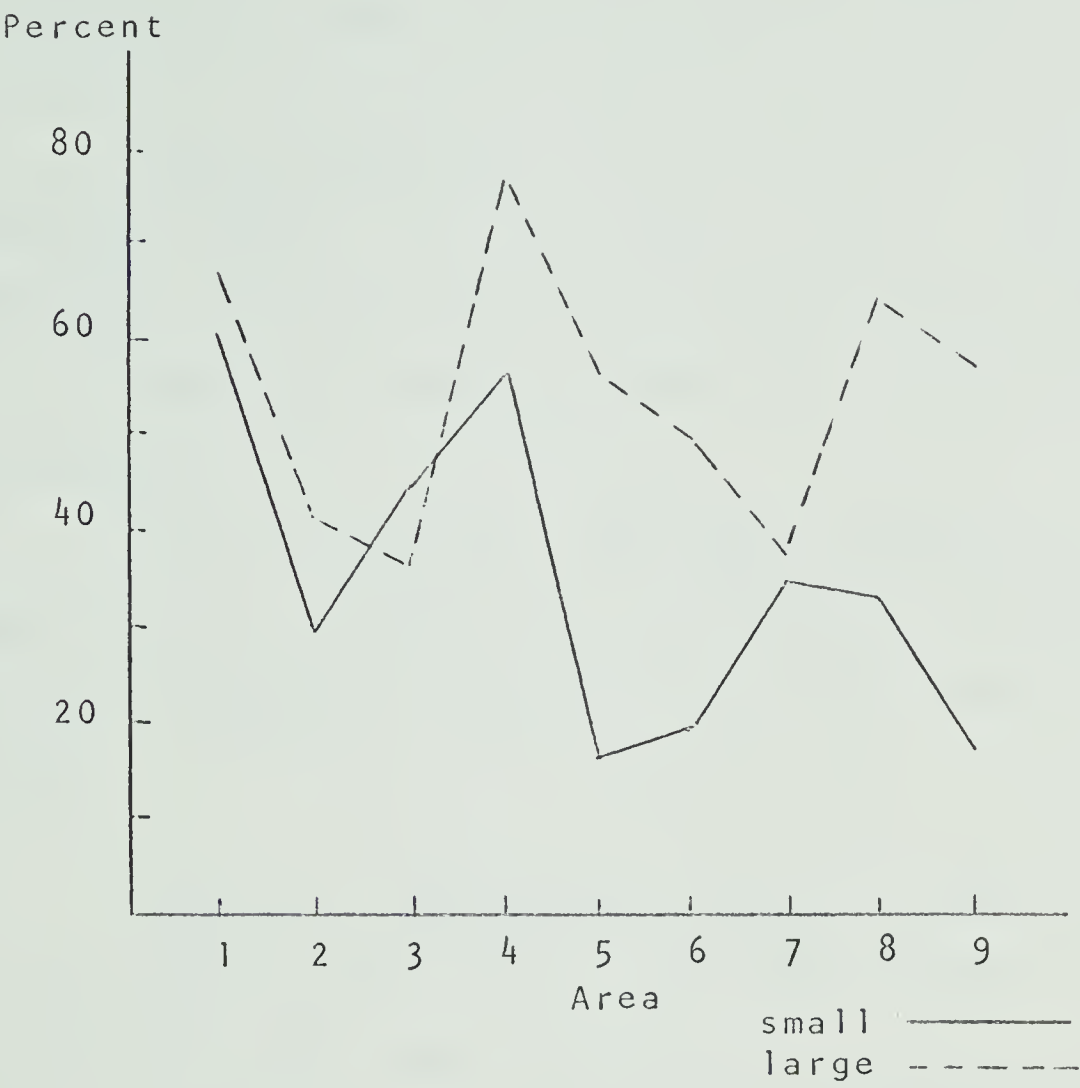


Figure 5

Variation in Size: All Areas



percentages achieved on each area. Following is a detailed analysis of each area, in order to discover differences between individual items due to size of the school.

Area I: policies. Area I resulted in no significant differences between large and small schools. Further, few differences could be observed by graphing mean scores of each item in Figure 6. However, large schools had slightly higher scores overall.

Schools with more than fifty students had observably higher means on use of medical examinations each year, wearing of appropriate gym clothing, and fitness testing twice a year.

Area II: instructional staff. Slight but non-significant differences favored the larger schools in this area. Figure 7 gives the item analysis.

Small schools had a greater number of instructors with university degrees and previous experience in normal schools. Larger schools appeared to have staff with more student teaching experience, provided more in-service training for instructors, used more volunteers in the program, and had more male staff available to teach boys twelve years and over.

Area III: instructional program procedures. Area III resulted in non-significant differences in favor of the small rather than large schools. Major differences favoring the small schools were seen in Figure 8 in the pupil-teacher





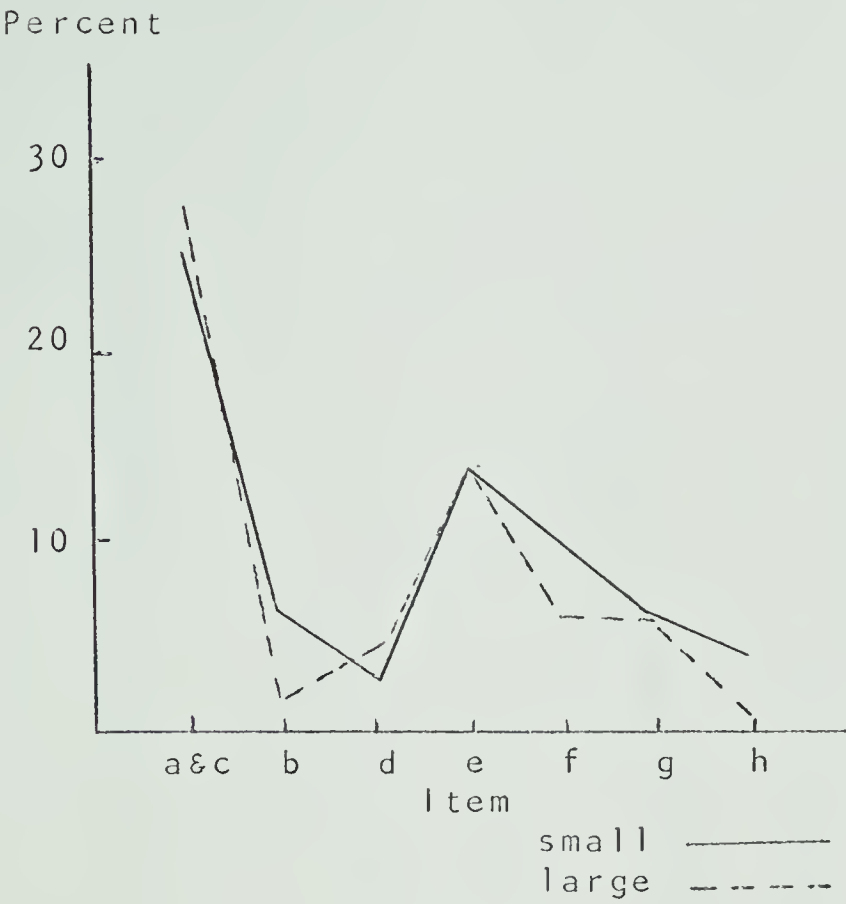


Figure 6

Variation in Size: Area I (Policies)

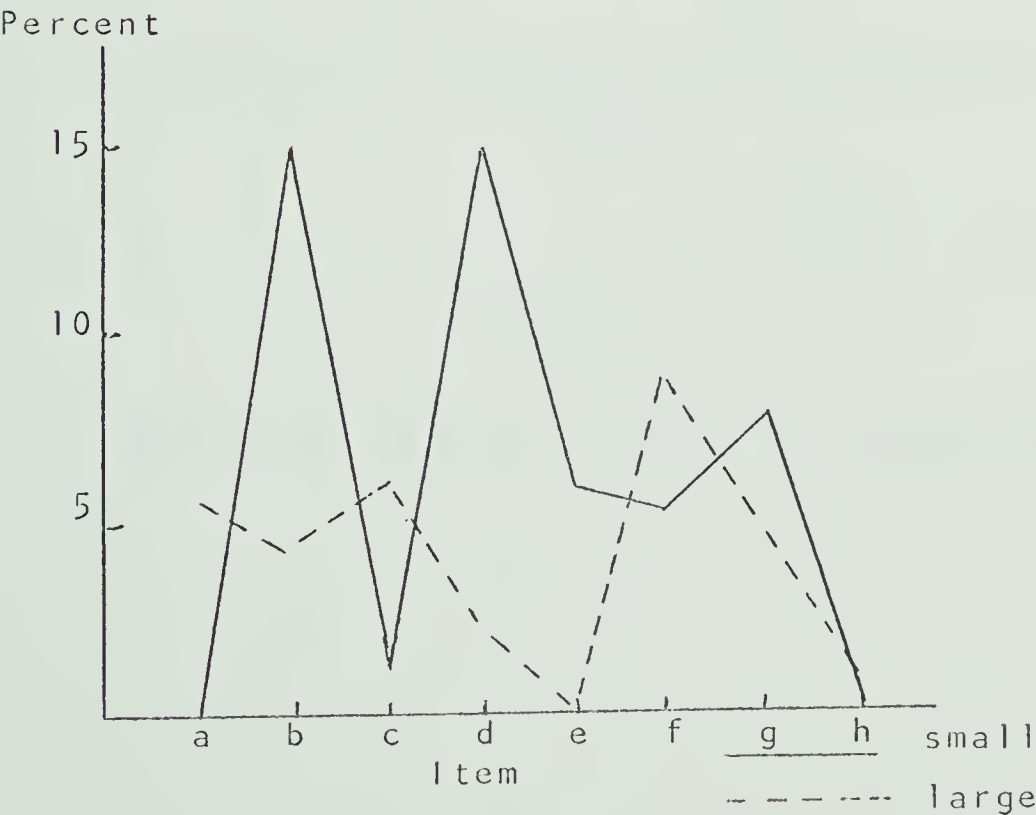


Figure 7

Variation in Size: Area II  
(Instructional Staff)



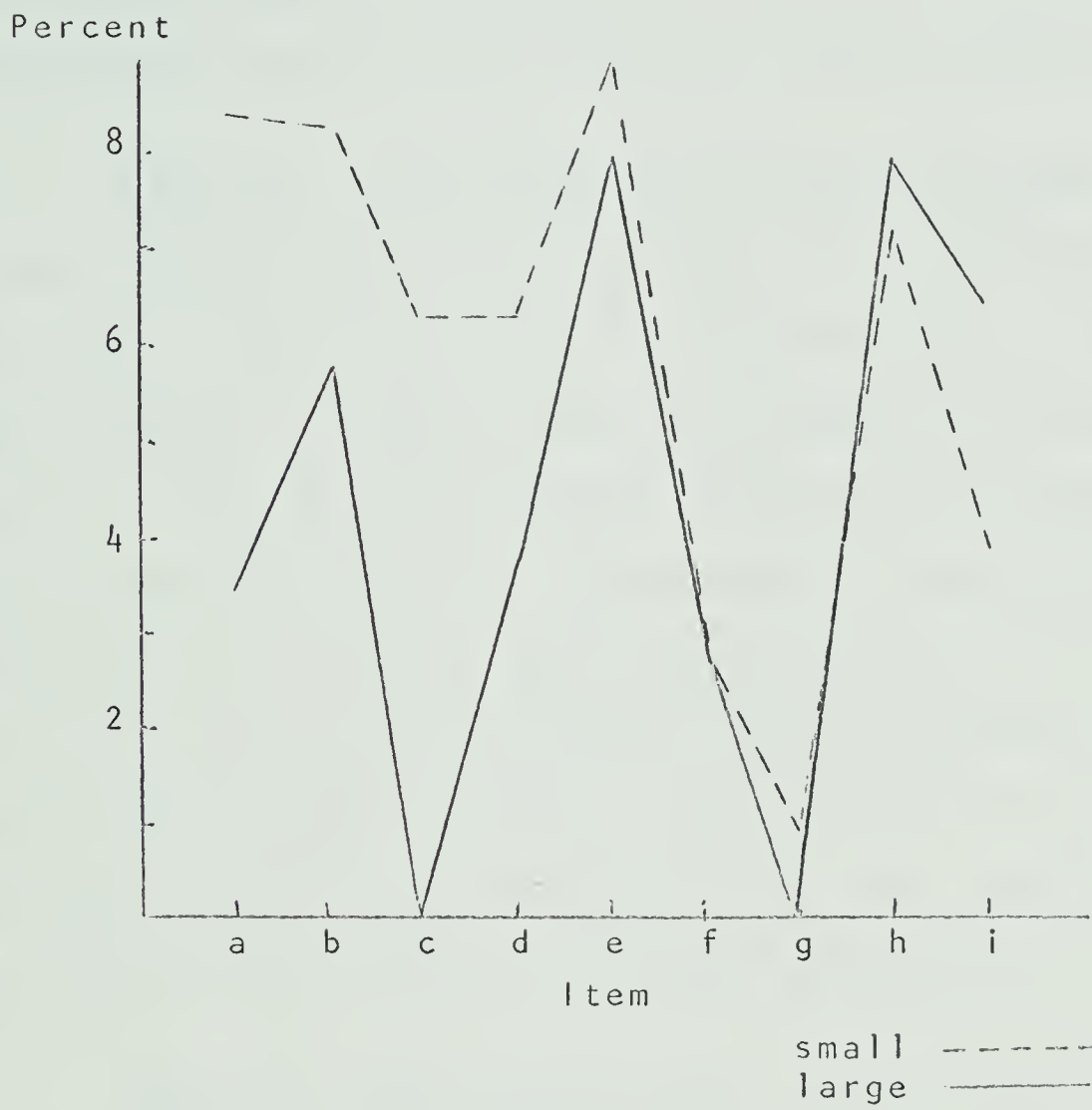


Figure 8

Variation in Size: Area III (Procedures)



ratios. Ratios were particularly lower for children under twelve years in classes of games, gymnastics and dance; and in classes for less experienced swimmers. The superior scores on pupil-teacher ratios of the smaller schools are logical since smaller classes would occur with lower enrollments. Several small schools had less than fifteen students in total.

Area IV: instructional program activities. Differences significant at the .05 level were found between activities of large and small school programs, in favor of larger schools. Figure 9 shows the largest difference appeared to be the more frequent inclusion of swimming in the larger schools' programs. Larger schools also included more instruction for children under twelve years in basic skills, self-competition, creative games, simple team games, and relays than did small schools. Large schools also included more group competition, individual and dual activities, team sports and officiating for children twelve years and over.

Area V: indoor facilities. Significant differences (significant at the .01 level) were found in favor of large school indoor facilities. These differences appear in Figure 10. Large schools were observably superior on every item. More large schools had gymnasiums large enough to contain regulation basketball courts, 60' x 30' or larger. Large schools also had more partitioned gymnasiums or two gymnasiums, greater access to swimming pools and bowling alleys, and more physical education teachers' offices.



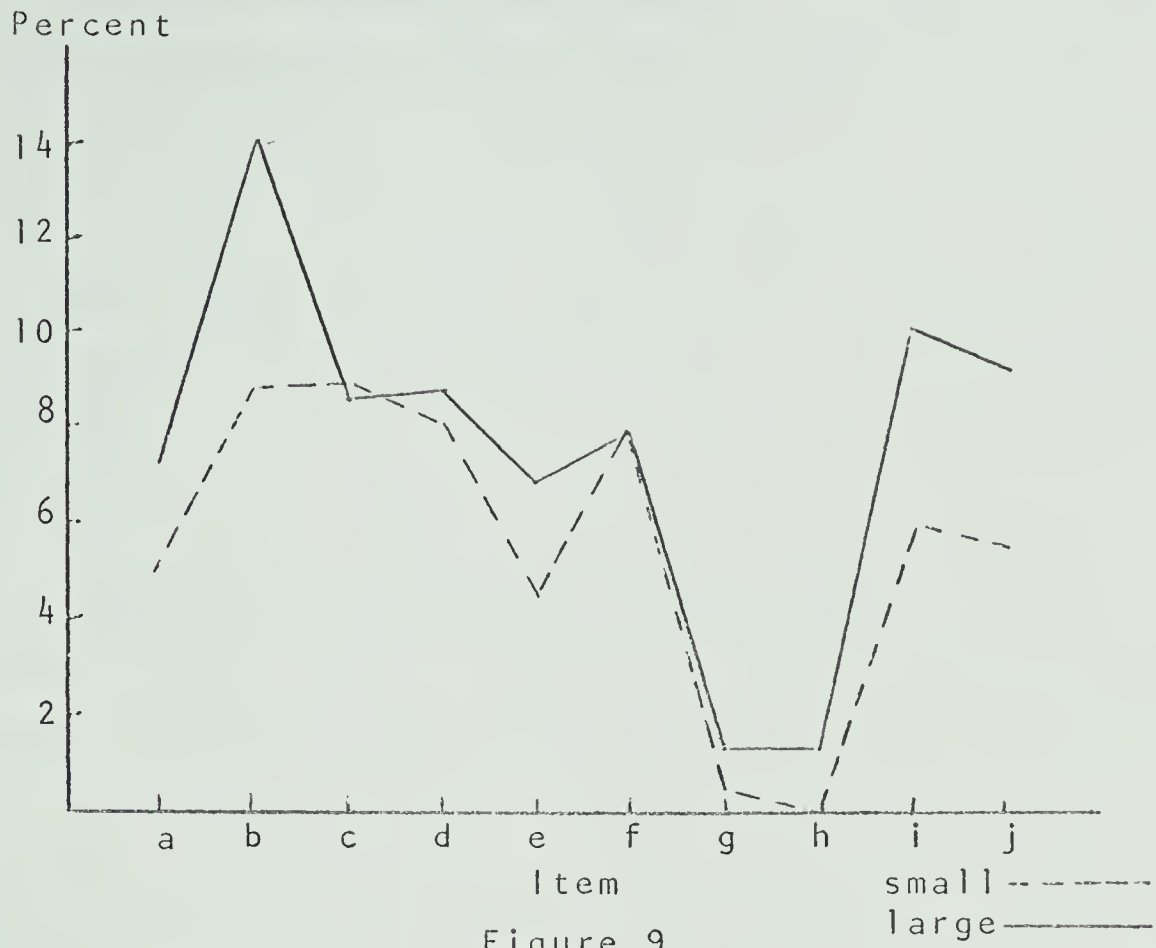


Figure 9  
Variation in Size: Area IV  
(Instructional Program Activities)

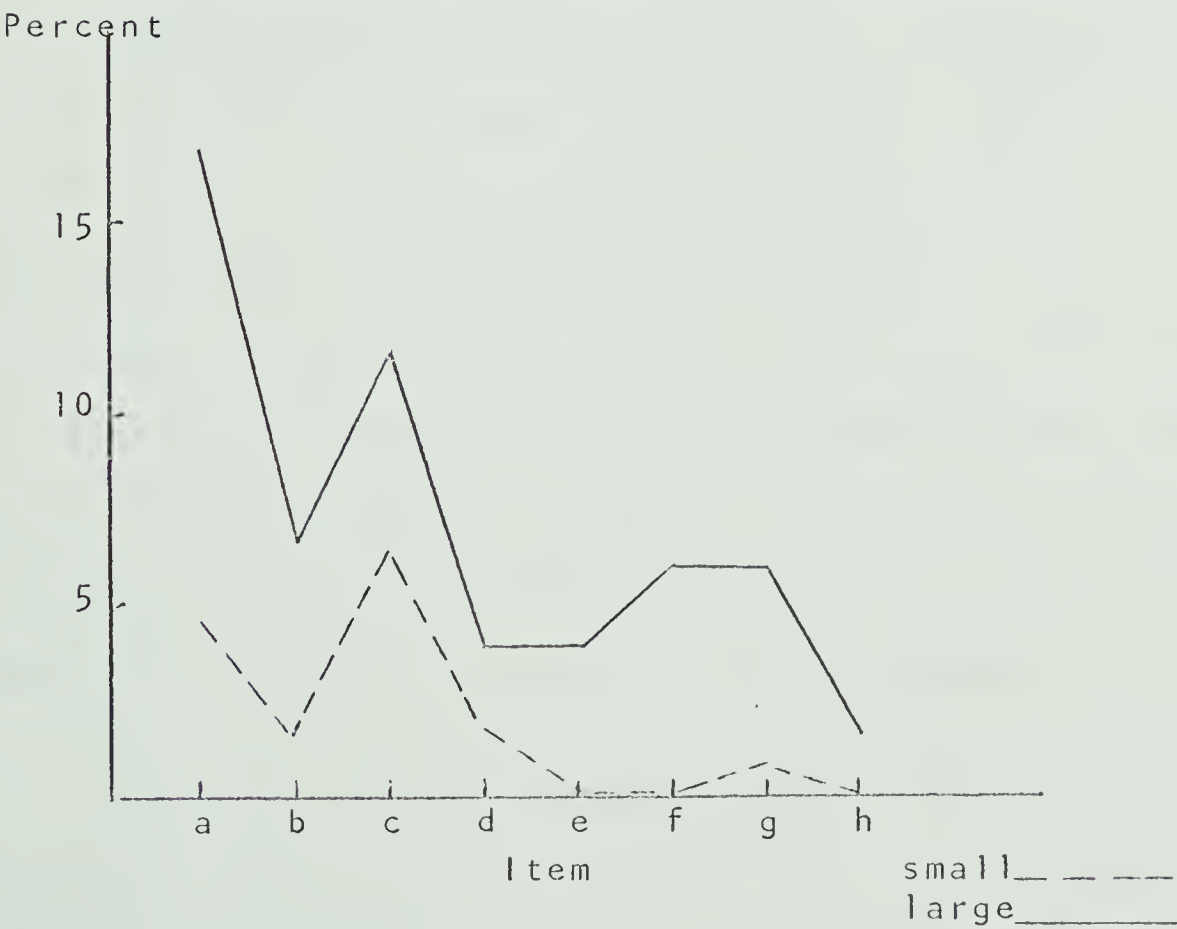


Figure 10  
Variation in Size: Area V  
(Indoor Facilities)





Area VI: outdoor facilities. Area VI resulted in significant differences (significant at the .01 level) in favor of larger schools' outdoor facilities. Figure 11 shows that small schools had less climbing equipment in the playground, fewer playing fields the size of a regulation football field or larger (110 yards x 60 yards), and less access to skating rinks.

Area VII: equipment and materials. Although observable differences seen in Figure 12 favored larger schools, there were no significant differences between equipment and materials of large and small schools. All scores were close although large schools appeared to have more tires and ping-minton bats.

Area VIII: intramural program. Differences significant at the .05 level were found favoring intramural programs of larger schools. While all scores regarding the regular intramural program were below maximum possible scores, larger schools had observably more regular intramural programs after school hours, and awarded trophies more often. Figure 13 illustrates this further. All schools provided some supervised "free play" each day, but more large schools included recreational activities in the program.

Area IX: athletic competition. Significant differences (significant at the .01 level) were again found favoring programs of the larger schools. Figure 14 shows that more



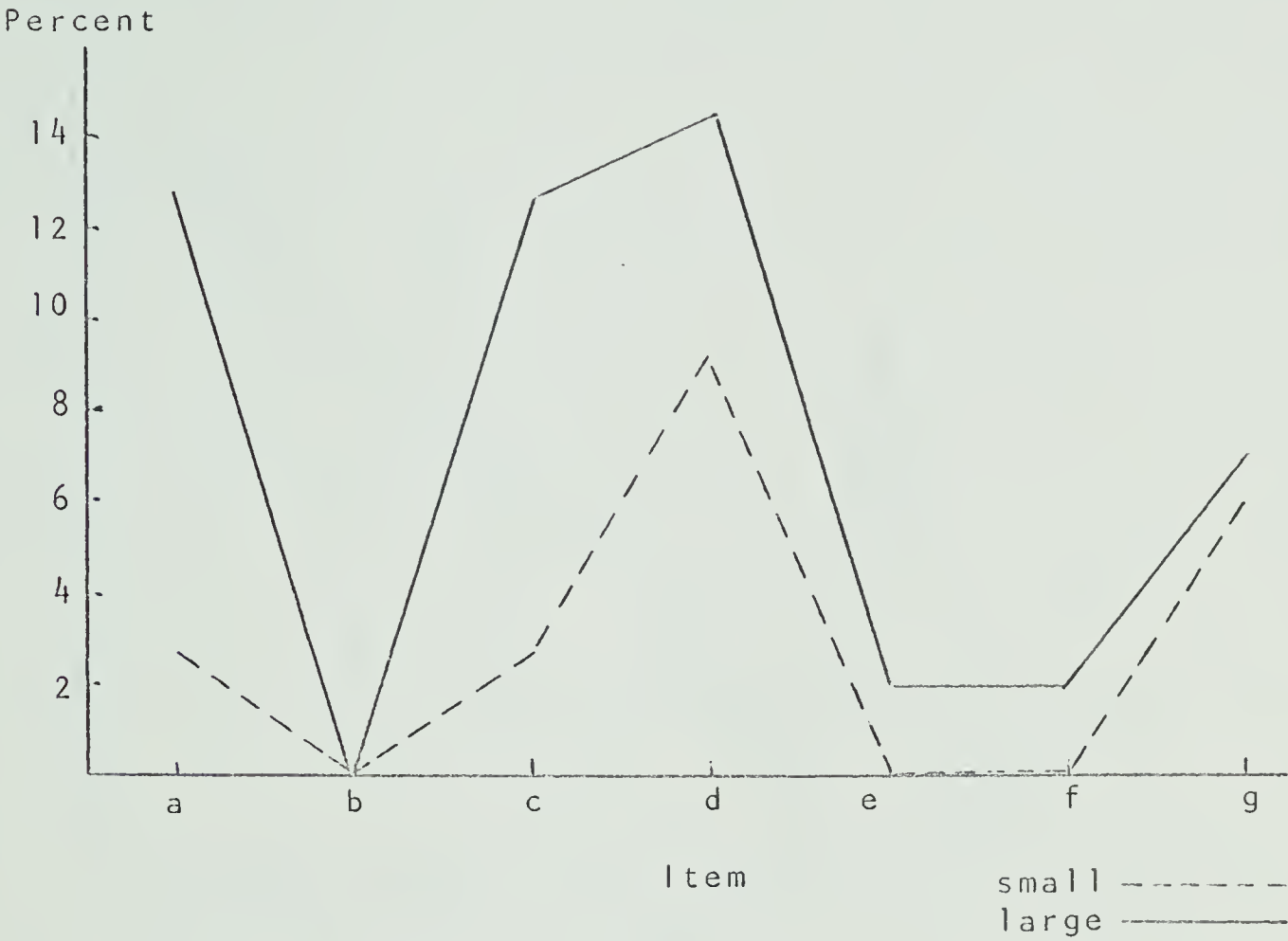


Figure 11

Variation in Size: Area VI  
(Outdoor Facilities)



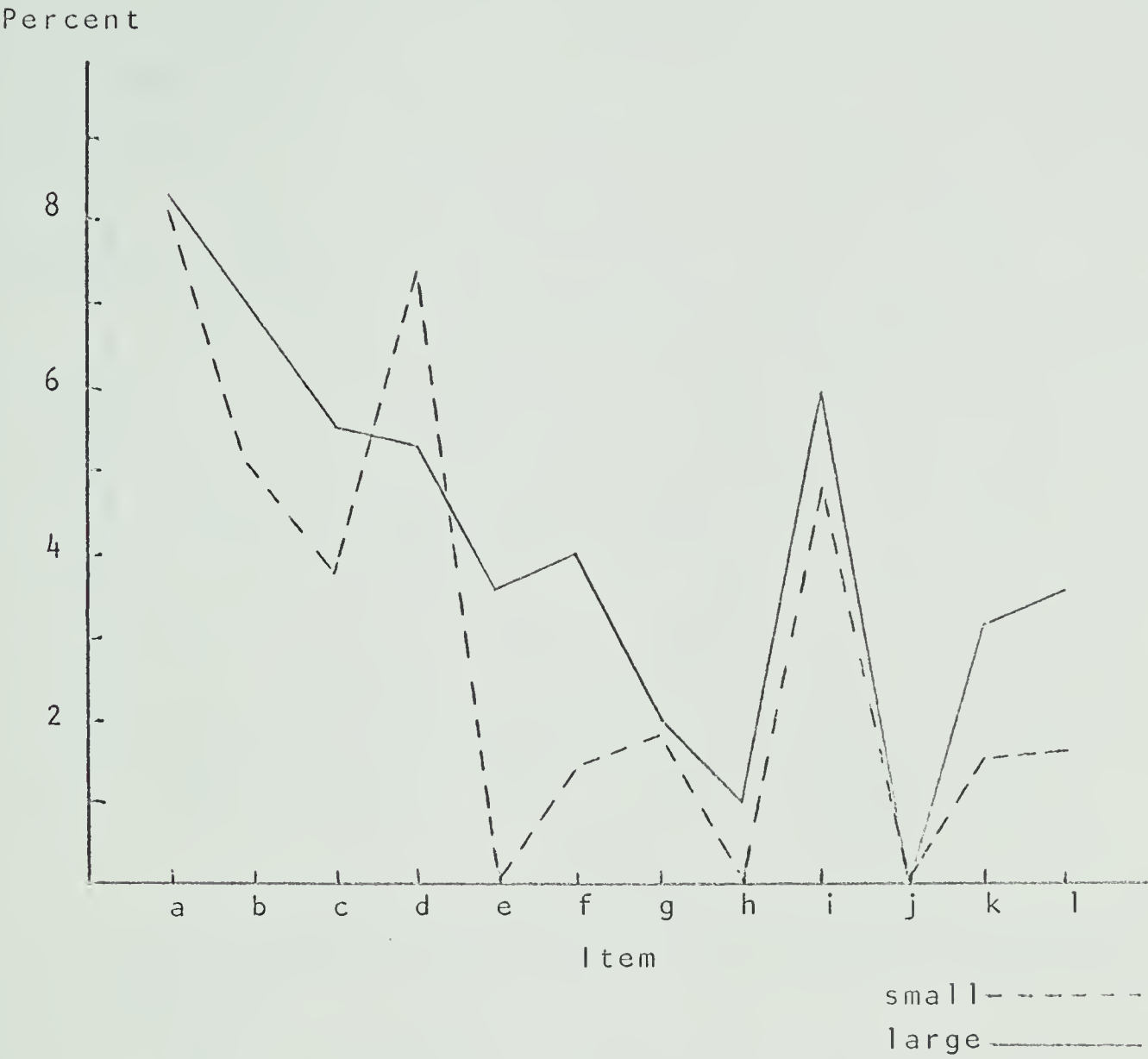


Figure 12

Variation in Size: Area VII  
(Equipment and Materials)



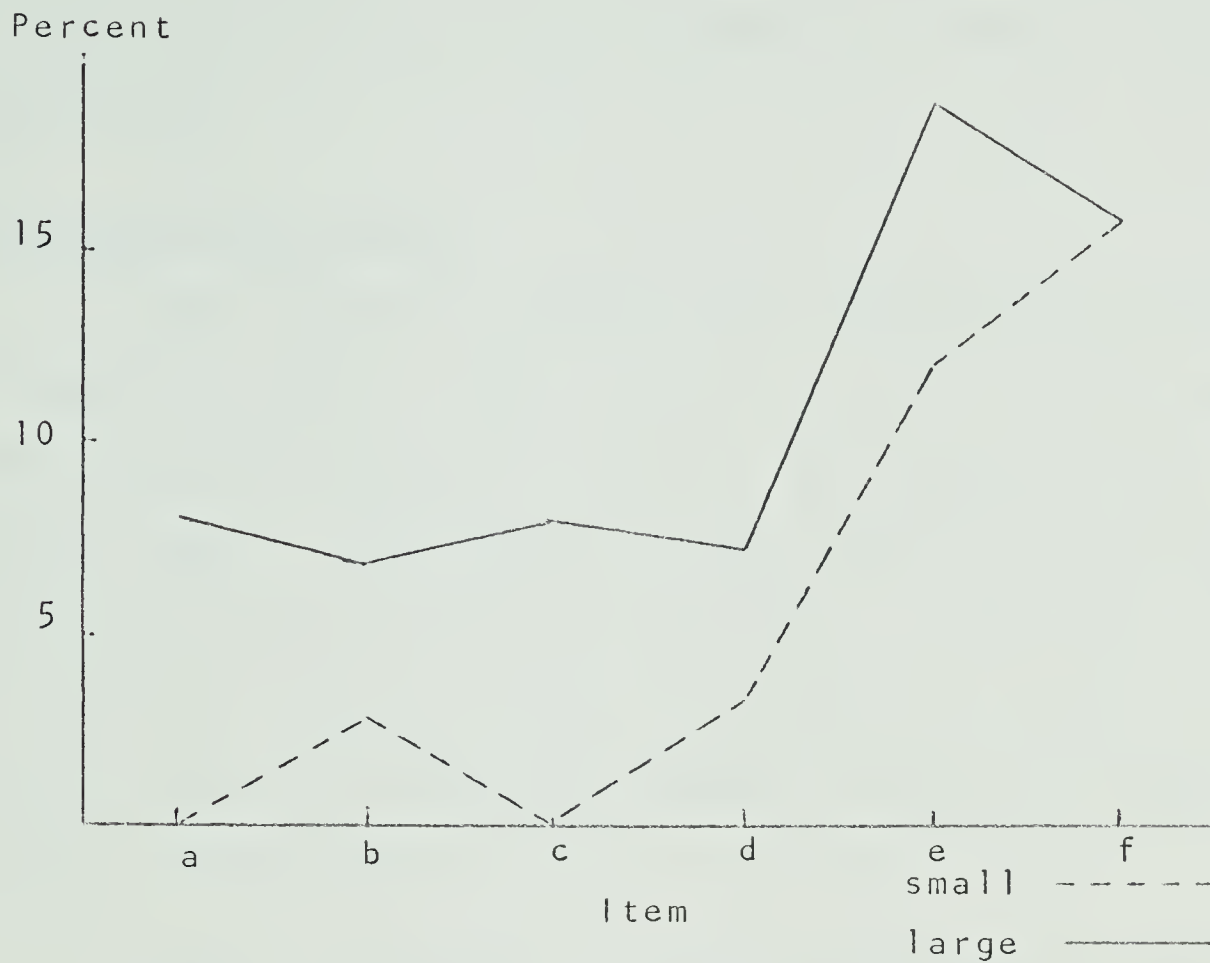


Figure 13  
Variation in Size: Area VIII (Intramural Program)

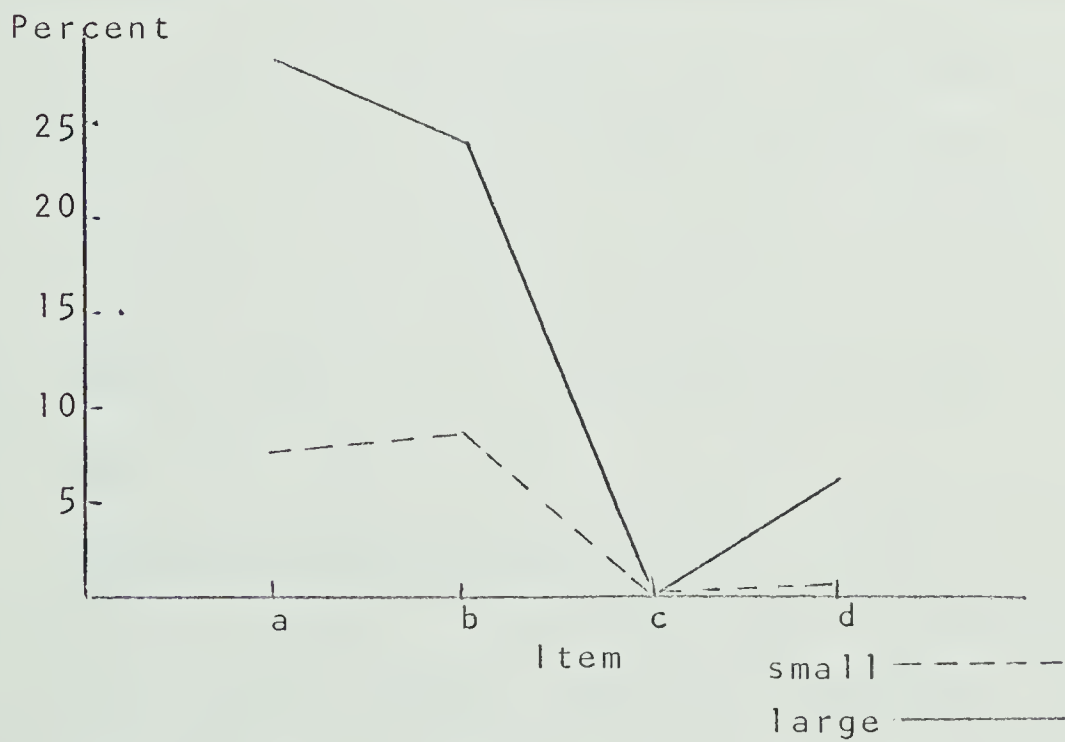


Figure 14  
Variation in Size: Area IX (Extramural Program)





large schools competed occasionally with other retarded children in a greater variety of activities than did small schools. No schools of either size participated in regular league competition.

### Residential Facilities

Two residential schools were compared to fourteen non-residential schools. This category resulted in the fewest number of significant differences. The hypothesis that residential schools would achieve higher scores than non-residential schools was supported in only two areas. (see Table 17) Area III was again inverted, with non-significant differences favoring the non-residential schools. Figure 15 summarizes the findings for the area.

Area I: policies. Although differences were not significant in this area, residential schools tended to have higher overall scores (see Figure 16). One exception was that non-residential schools had a greater percentage of their students taking part in physical education programs. Residential schools had more medical examinations before their programs began, more physical education per week, and had more required gym dress regulations.

Area II. instructional staff. Figure 17 states that this area also resulted in non-significant differences in favor of residential schools. Several observable differences favored non-residential schools; however non-residential school instructors had more university degrees, and more



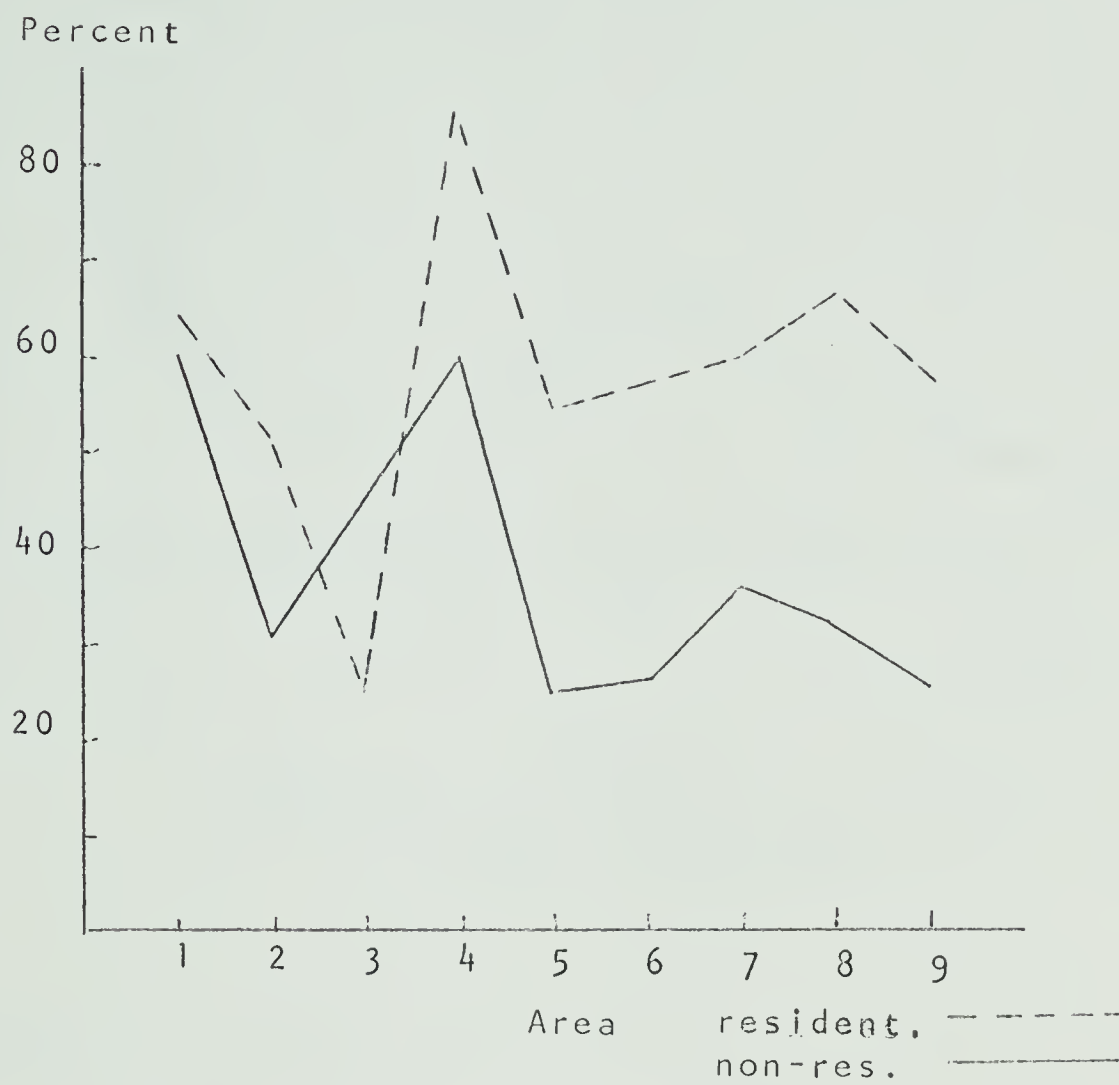


Figure 15

Variation in Residential Facilities:  
All Areas



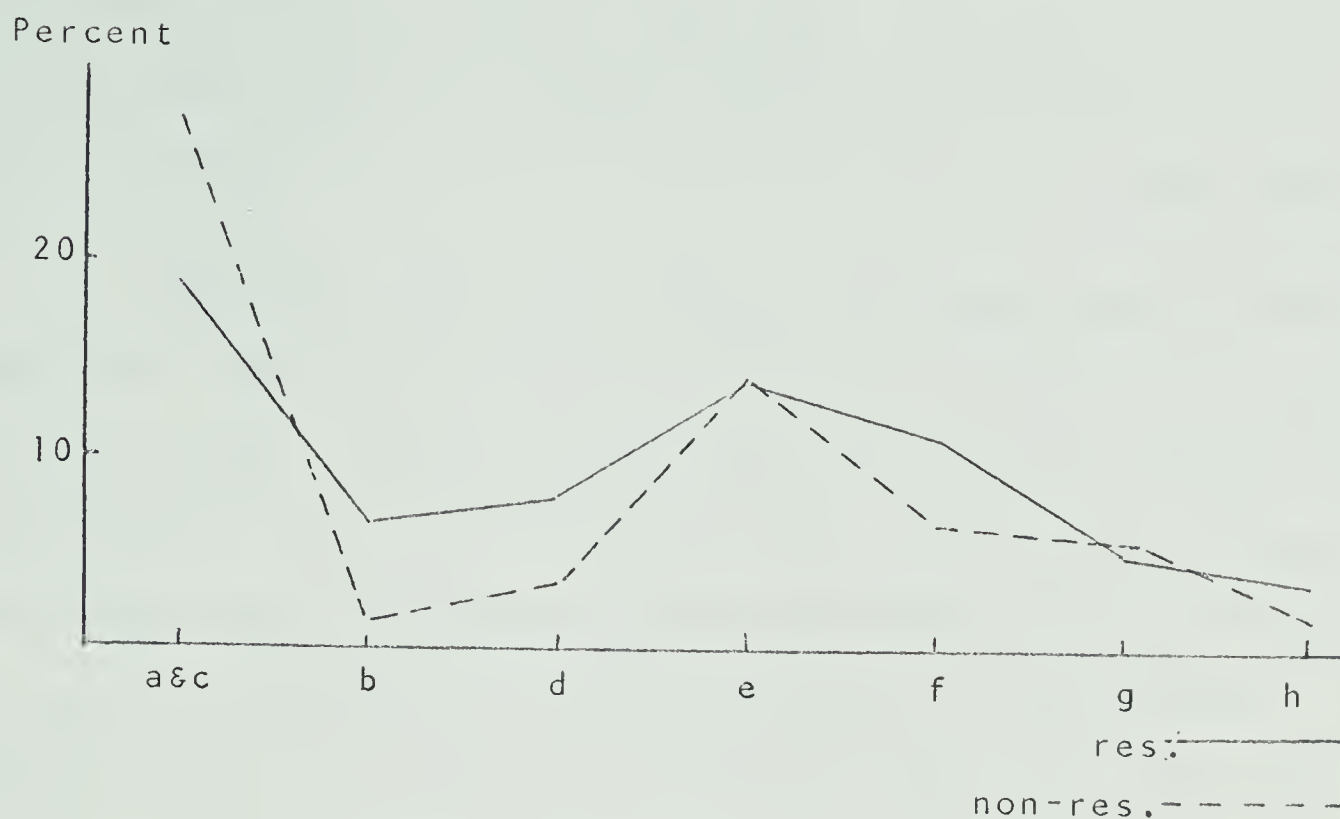


Figure 16  
Variation in Residential Facilities:  
Area I (Policies)

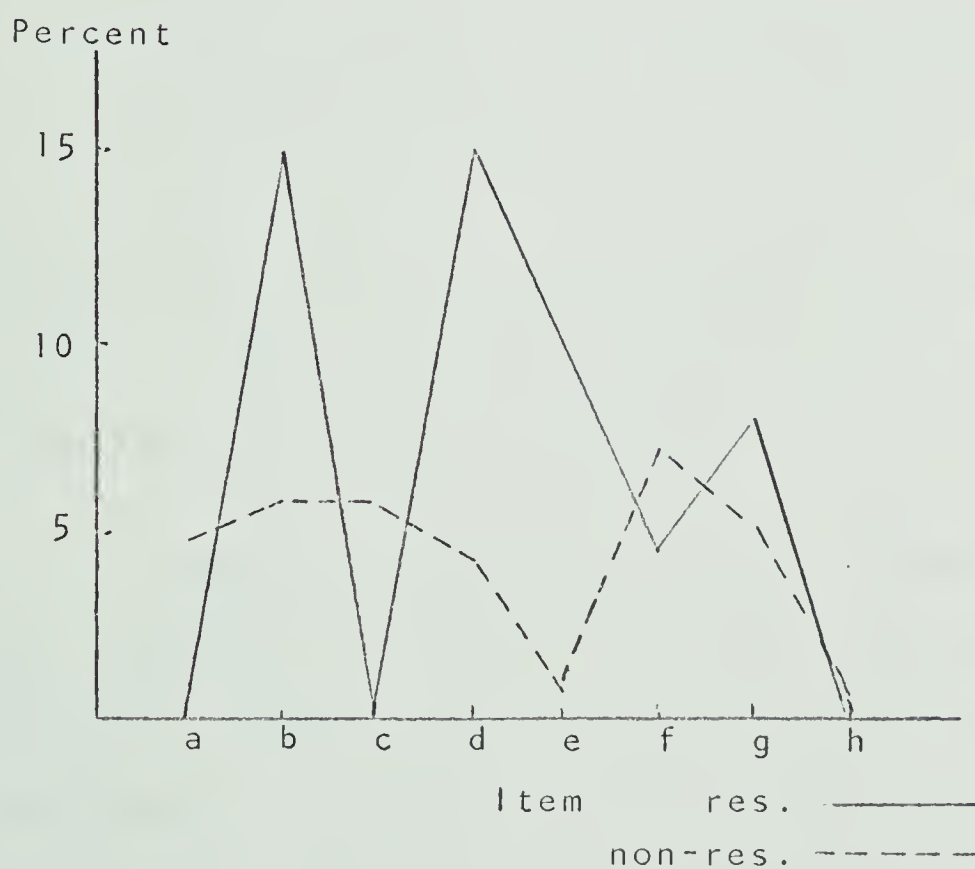


Figure 17  
Variation in Residential Facilities:  
Area II (Instructional Staff)



experience in teaching normal children. Residential schools had very high scores on student teaching experience, in in-service training, and having male instructors for older boys.

Area III: instructional program procedures. Observable (see Figure 18) but non-significant differences favored non-residential schools in this area, particularly concerning pupil-teacher ratios in all activities. Residential schools also used fewer textbooks and reference materials as a basis for their curriculums. Residential schools offered more opportunities for student planning and leadership than did non-residential schools.

Area IV: instructional program activities. Although differences were not large, they were consistently in favor of residential schools, thus producing differences significant at the .05 level as hypothesized. Residential schools had particularly high scores on inclusion of swimming, weight lifting, and skills with recreational carry-over in their programs. Other differences were not large but were observable. Figure 19 gives the item analysis.

Area V: indoor facilities. No significant differences occurred in this area although residential schools had observable higher scores, as seen in Figure 20. Residential schools were especially superior in having a gymnasium of adequate size with two or more teaching stations. They also had more physical education instructors' offices, and greater access to curling rinks.





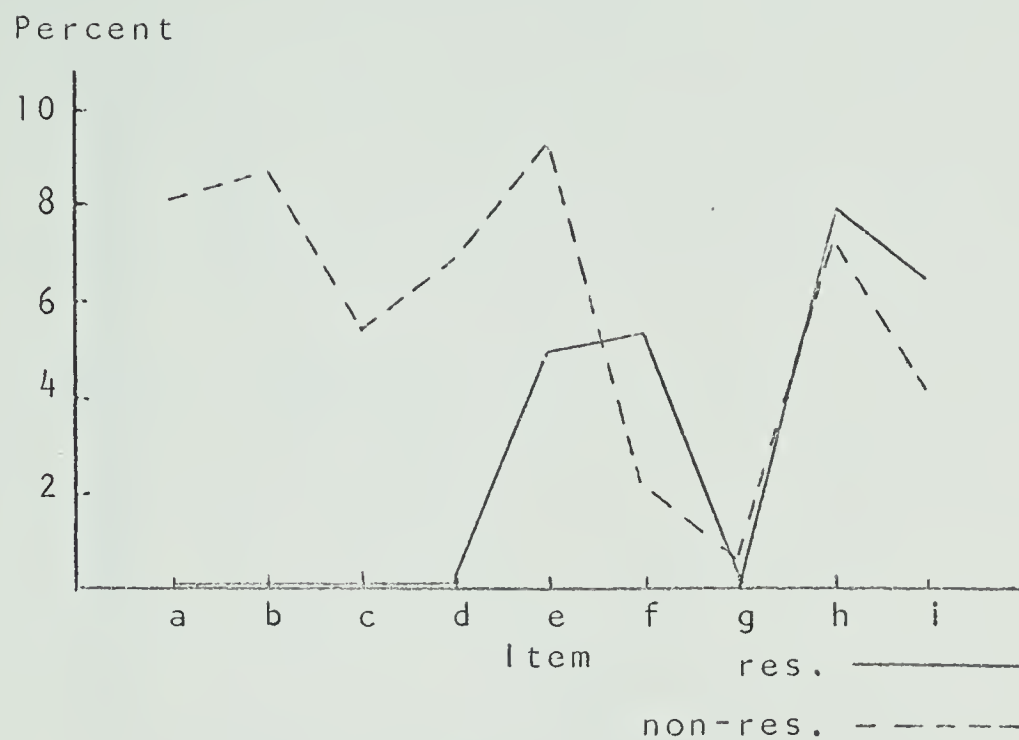


Figure 18

Variation in Residential Facilities:  
Area III (Procedures)

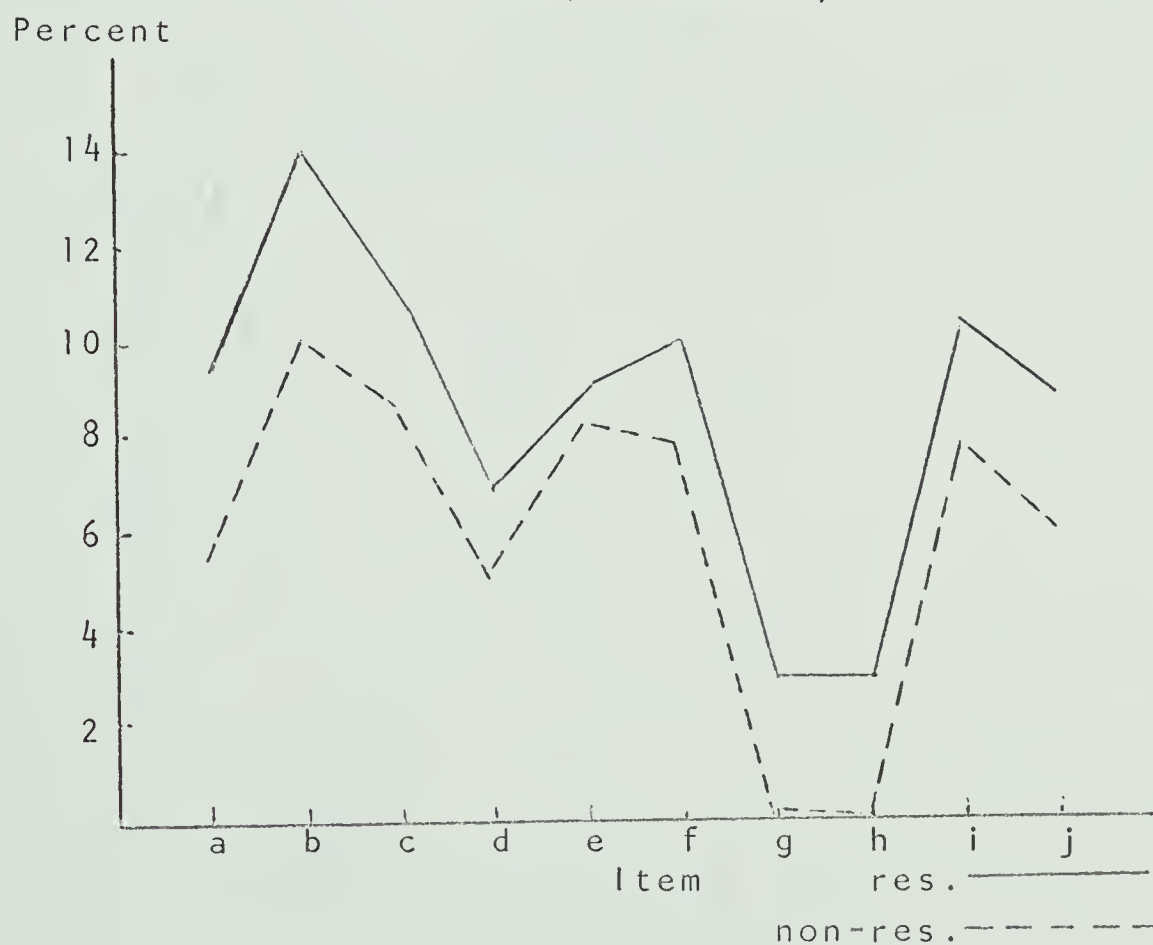


Figure 19

Variation in Residential Facilities:  
Area OV (Instructional Program Activities)



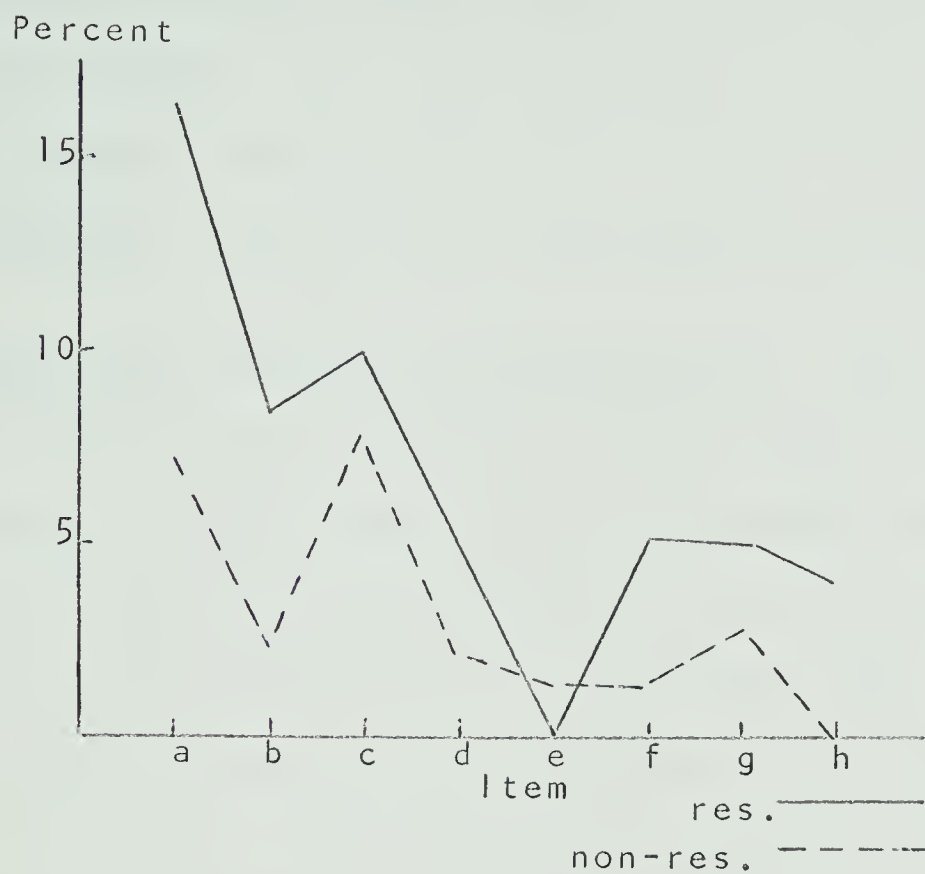


Figure 20

Variation in Residential Facilities:  
Area V (Indoor Facilities)

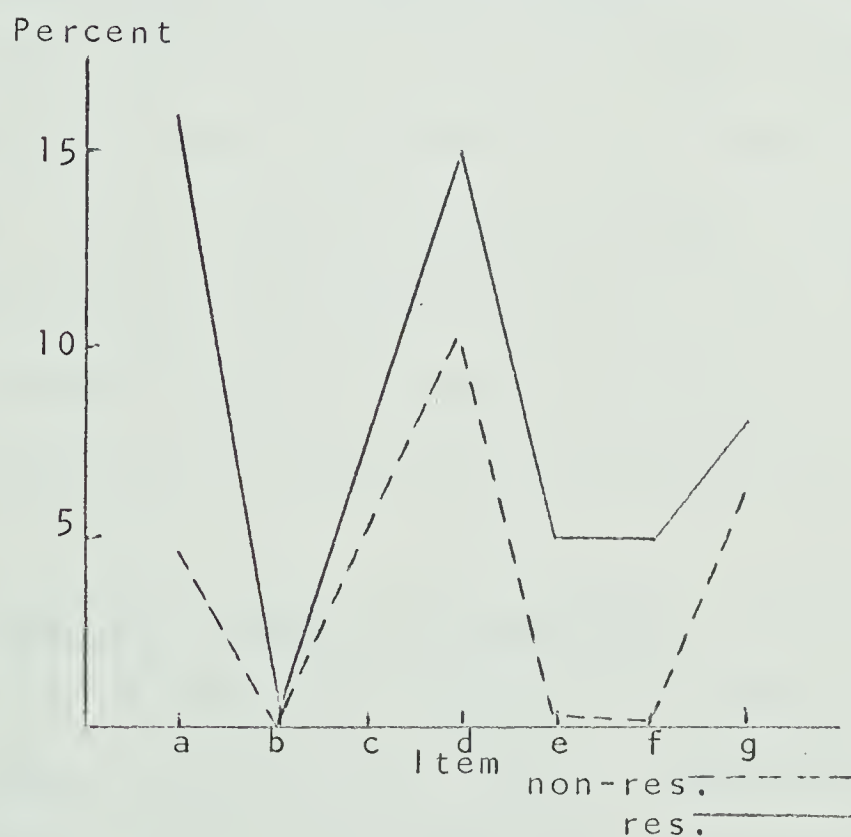


Figure 21

Variation in Residential Facilities:  
Area VI (Outdoor Facilities)



Area VI: outdoor facilities. Once again the residential schools were observably superior (see Figure 21) in this area but without sufficient strength to support the hypothesis. Non-residential schools also had low scores on climbing apparatus, wading pools and tennis courts.

Area VII: equipment and materials. The category of residential versus non-residential produced the only significant differences (significant at the .05 level) favoring an hypothesis in this area (see Figure 22). Most scores were very close with the exceptions of pingminton bats, climbing ropes and ladders, and gymnastic equipment, in which residential schools were favored. Non-residential schools had slightly higher scores on hoops and skipping games.

Area VIII: intramural program. No significant differences were found in this area, although residential schools had observably higher scores on five of the six items (see Figure 23). No differences between types of schools were found in the item concerning supervised "free play" since all schools reported usually having it. Non-residential schools had low scores on all parts of the competitive intramural program.

Area IX: athletic competition. Area IX resulted in no significant differences although residential schools had a greater amount of occasional competition with children from other schools for retarded children. Residential schools also competed in a greater variety of activities. Figure 24 gives



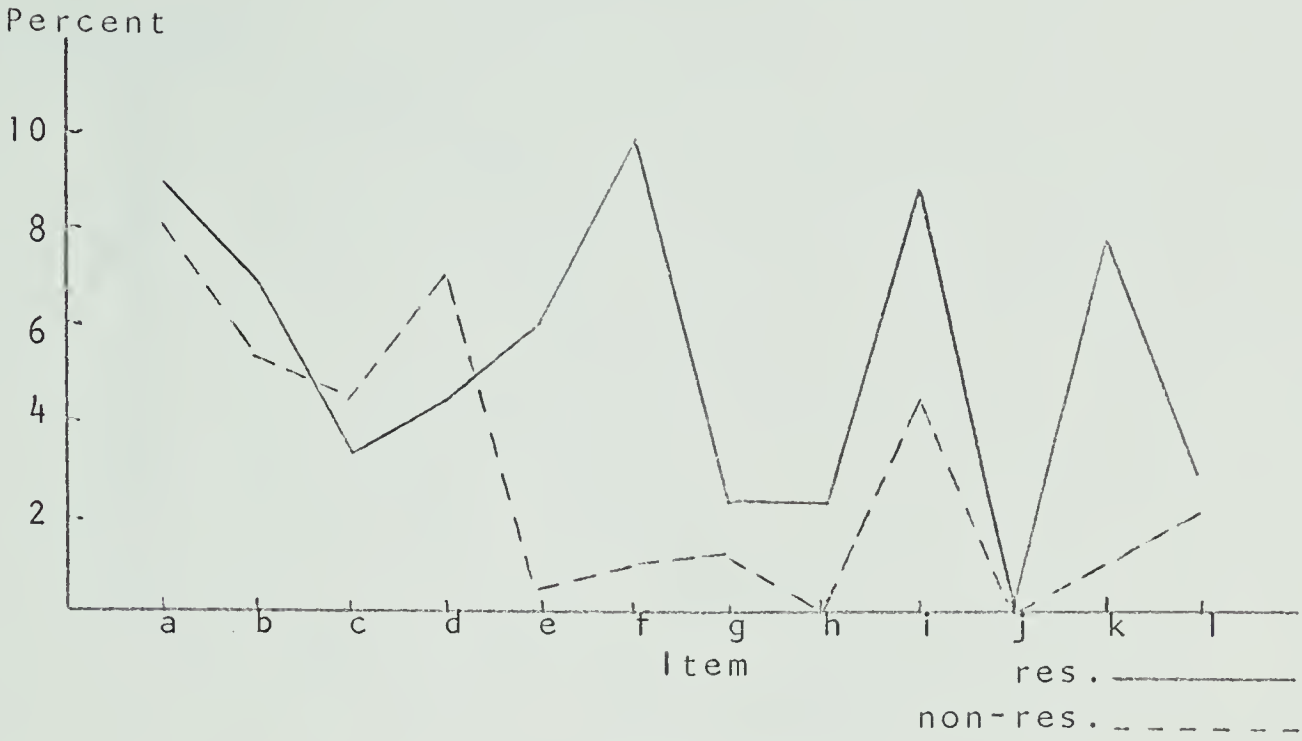


Figure 22

Variation in Residential Facilities: Area VII  
(Equipment and Materials)

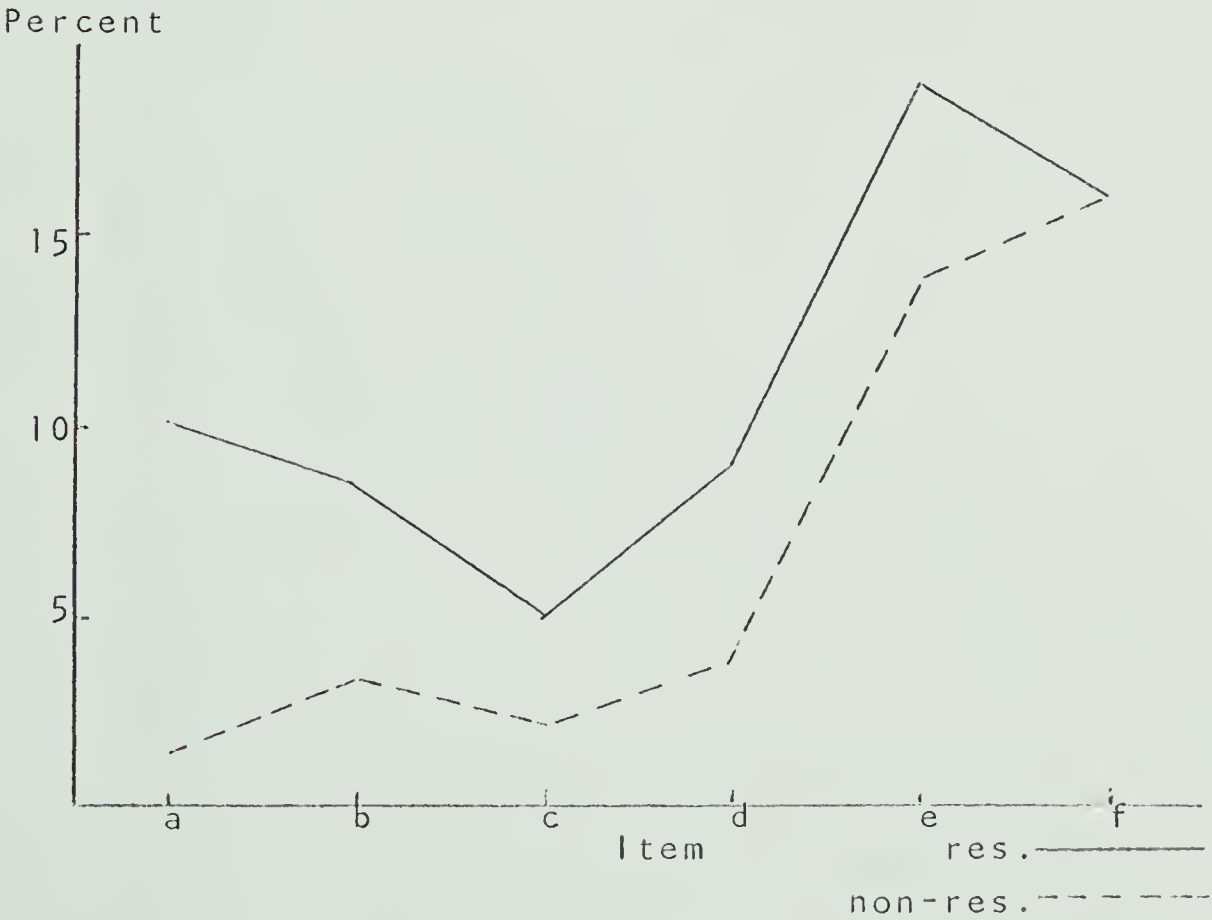


Figure 23

Variation in Residential Facilities:  
Area VIII (Intramural Program)





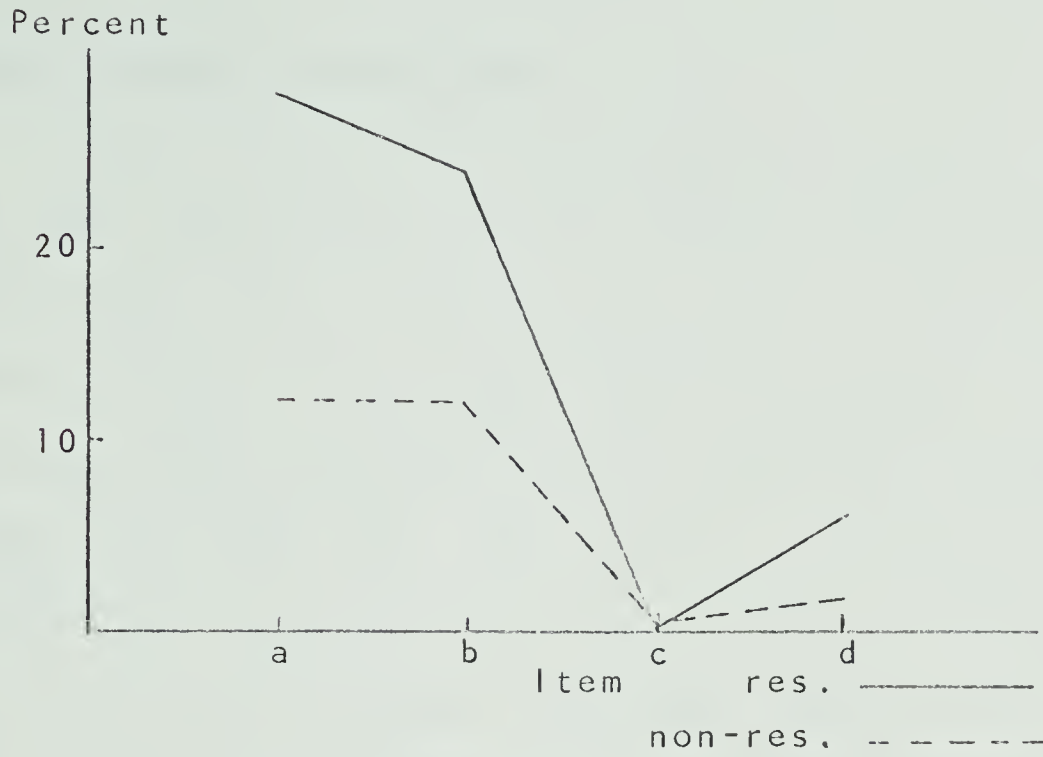


Figure 24

Variation in Residential Facilities  
Area IX (Extramural Program)

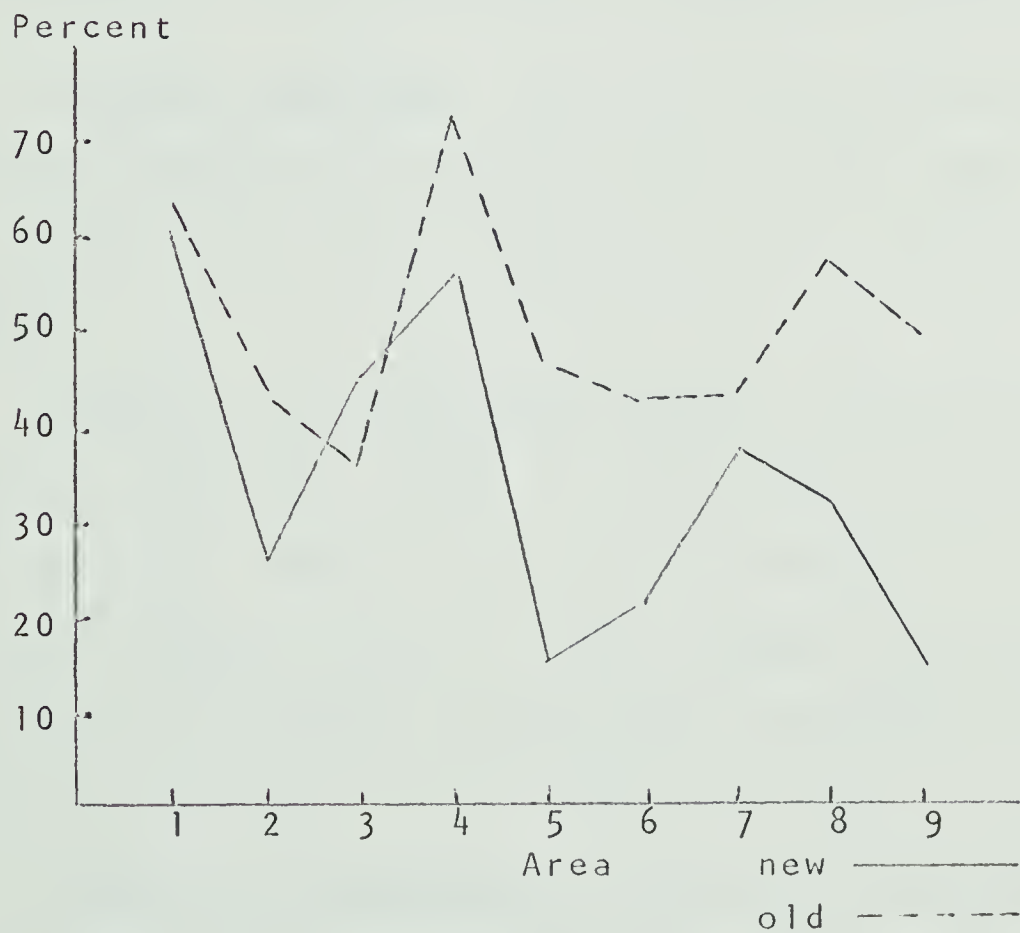


Figure 25

Variation in Years of Operation: All Areas



an item analysis.

#### Number of Years of Operation

Nine schools which had been operating for up to ten years were compared with seven schools which had been operating for more than ten years, in order to determine the effects of years of operation upon the program. Significant differences were found in four of the nine, favoring older schools (see Table 17). The results of these four areas supported the hypothesis that older schools would have higher scores than newer schools. The only significant differences found in the area of instructional staff were found in this category. Area III was again inverted, observably favoring newer schools. Figure 25 gives a summary of the category.

Area I: policies. Very few differences were seen in Figure 26 favoring one type of school or the other, although older schools were more inclined to require proper gym clothing.

Area II: instructional staff. Differences significant at the .01 level were found favoring older schools in this area (see figure 27). While few staff in schools of either type had university degrees, staff in older schools had more preparation in the forms of student teaching and in-service training. No male instructors were found in new schools.

Area III: procedures. New schools appeared to have higher scores on six of the nine items in this area, although no differences were significant (see Figure 28)..



Percent

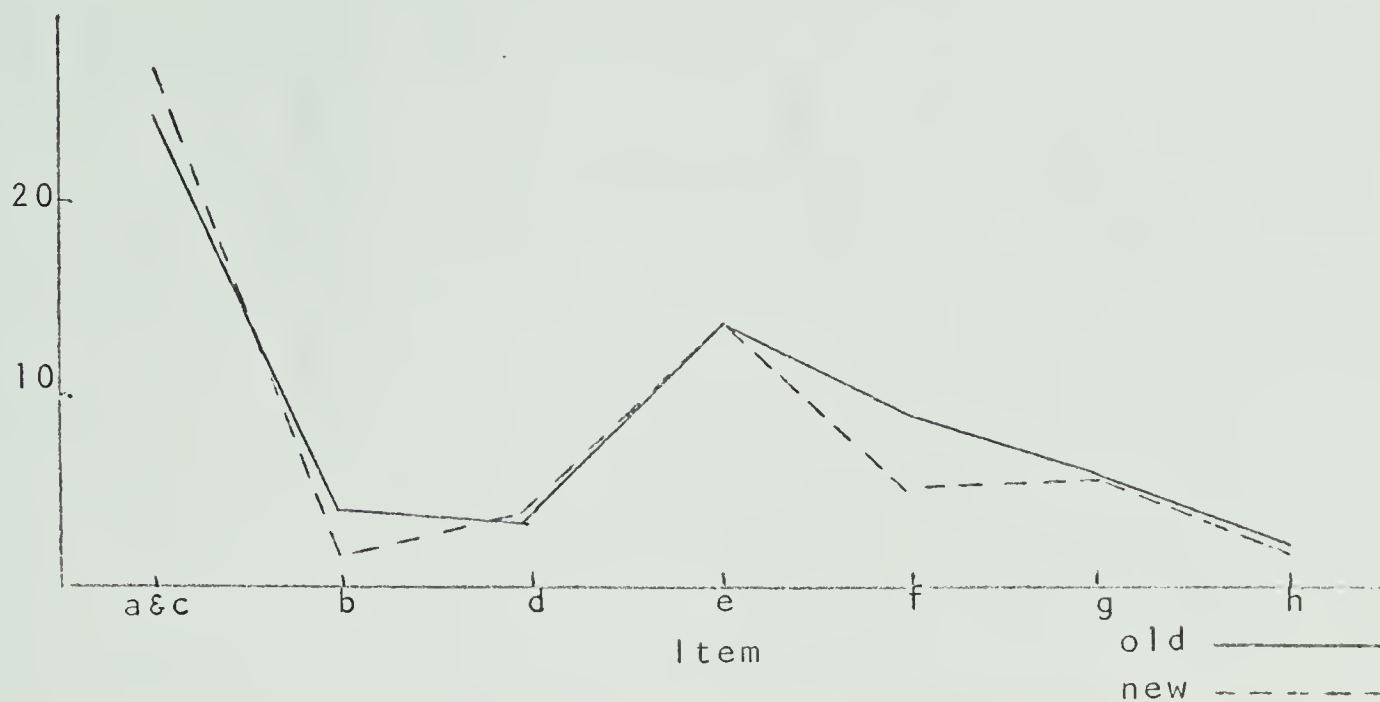


Figure 26

Variation in Years of Operation:  
Area I (Policies)

Percent

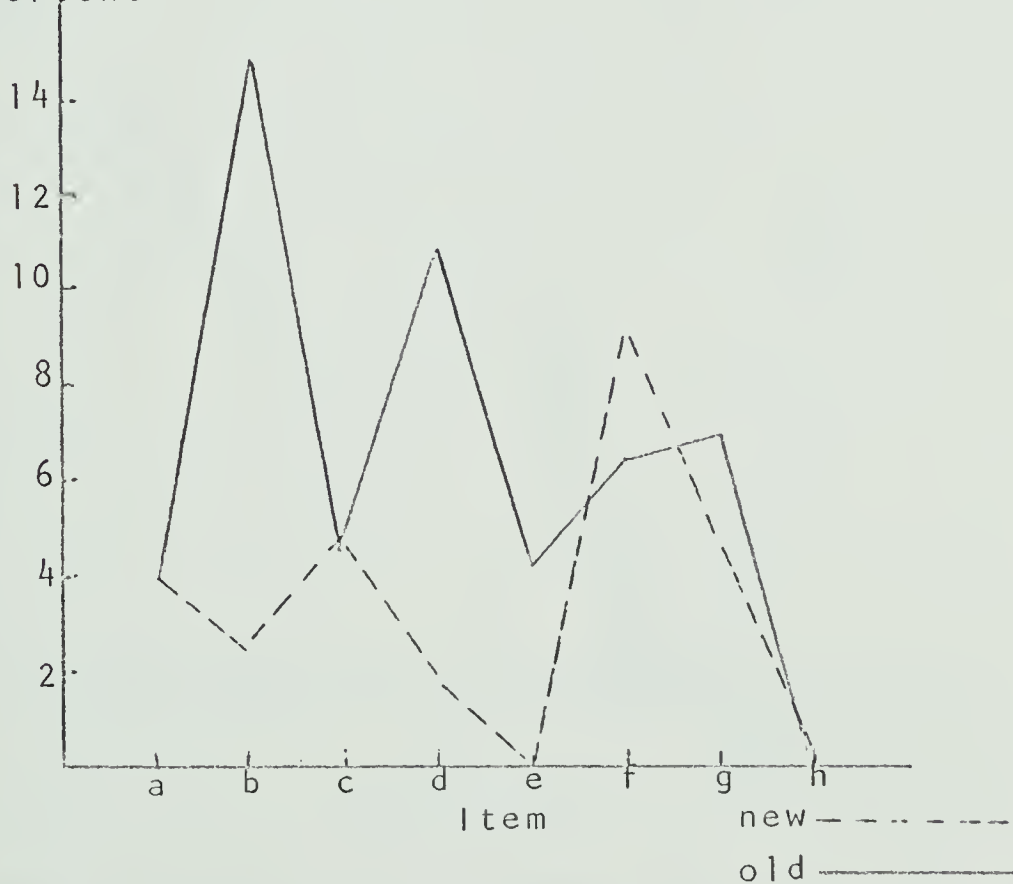


Figure 27

Variation in Years of Operation:  
Area II (Instructional Staff)



Percent

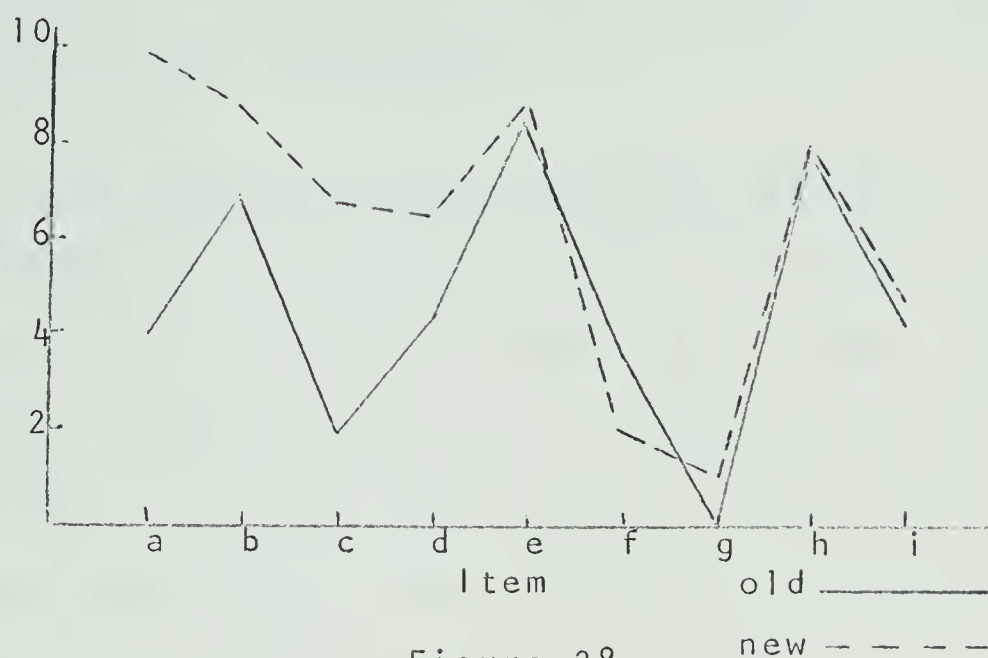


Figure 28

Variation in Years of Operation:  
Area III (Procedures)

Percent

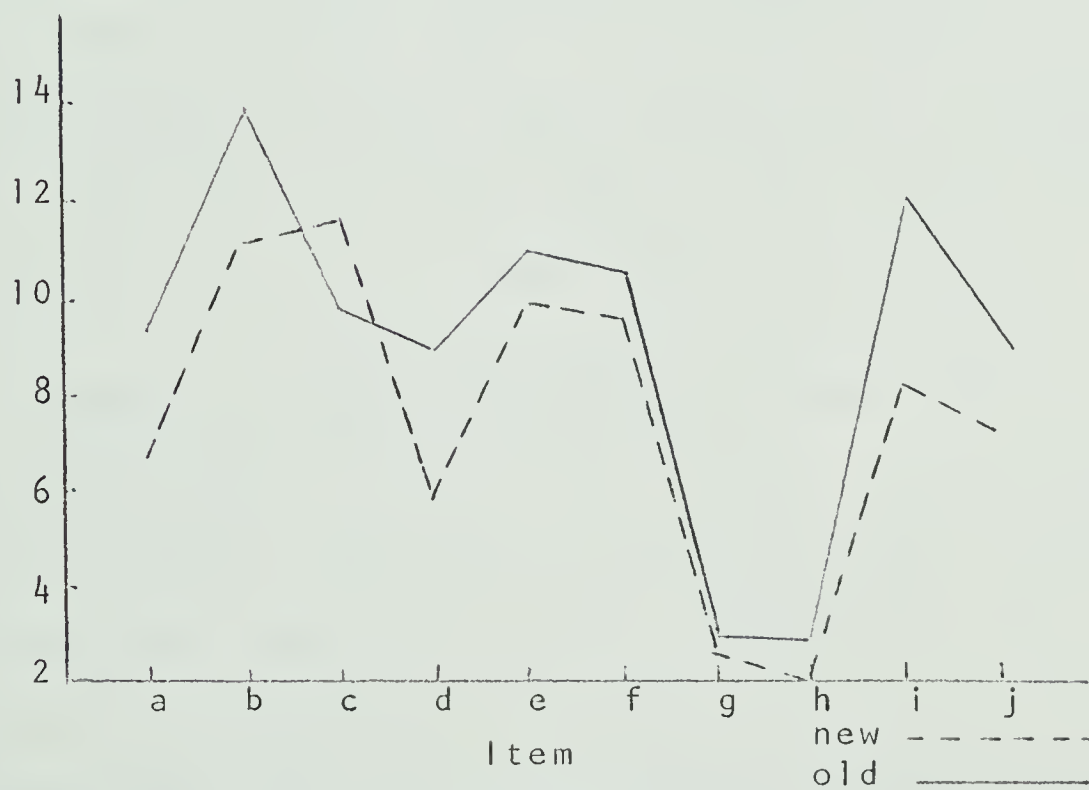


Figure 29

Variation in Years of Operation: Area IV  
(Instructional Program Activities)





Main differences favoring new schools resulted from the pupil-teacher ratios in all activities.

Area IV: instructional program activities. No significant differences were found between the schools in this area, although older schools had observably higher scores on several items as seen in Figure 29. New schools had a slightly higher score than older schools on the gymnastics and tumbling. Mean scores were all within four percent of each other.

Area V: indoor facilities. Older schools had significantly higher scores (significant at the .05 level) in area V than did new schools, and had observably higher scores on every item (see Figure 30). New schools had particularly inadequate showers, locker rooms, instructors' offices, and access to bowling or curling rinks. They also had few gyms partitioned to allow two or more teaching stations.

Area VI: outdoor facilities. Older schools again had significantly higher scores in this area, (significant at the .05 level) and were observably superior to newer schools in all but one item (see Figure 31). Older schools were particularly superior in having more climbing apparatus and playground equipment, and in having adequate playing areas and skating facilities.

Area VII: equipment and materials. Very few differences were observed in Figure 32 in the area of equipment



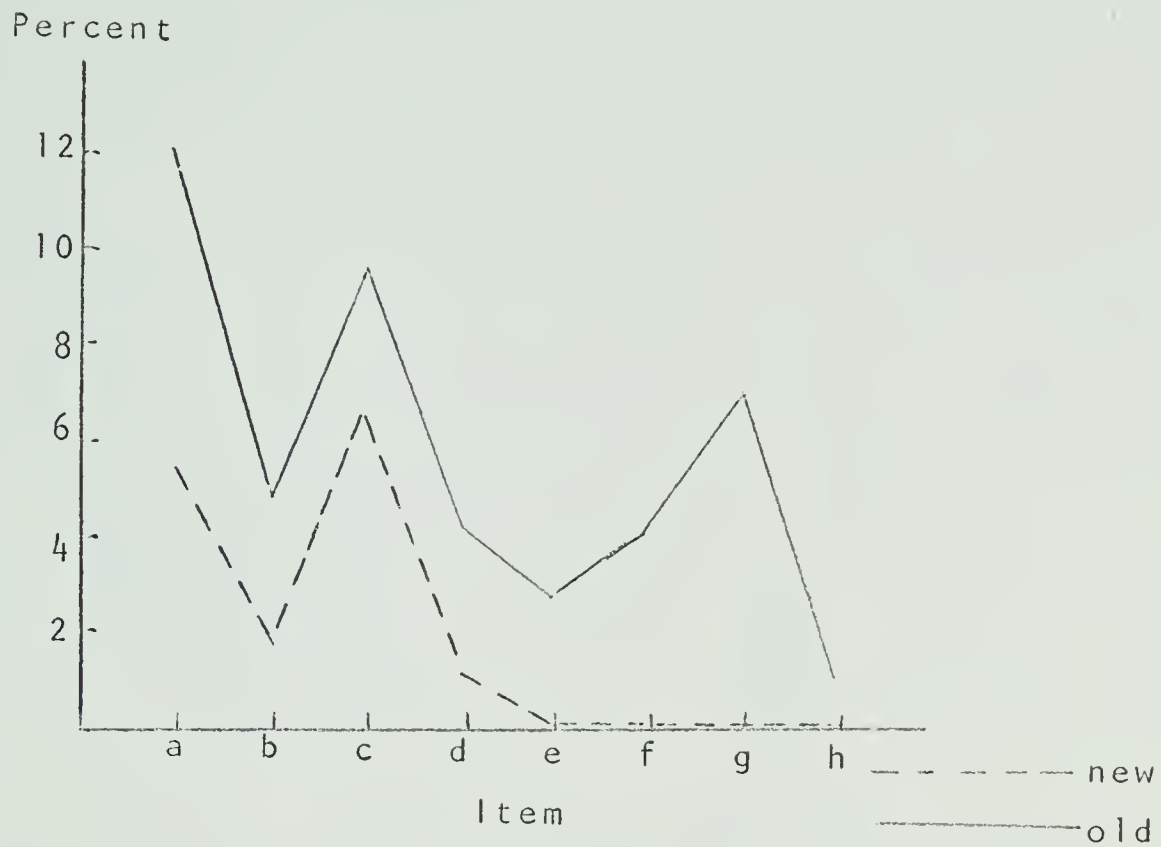


Figure 30  
Variation in Years of Operation:  
Area V (Indoor Facilities)

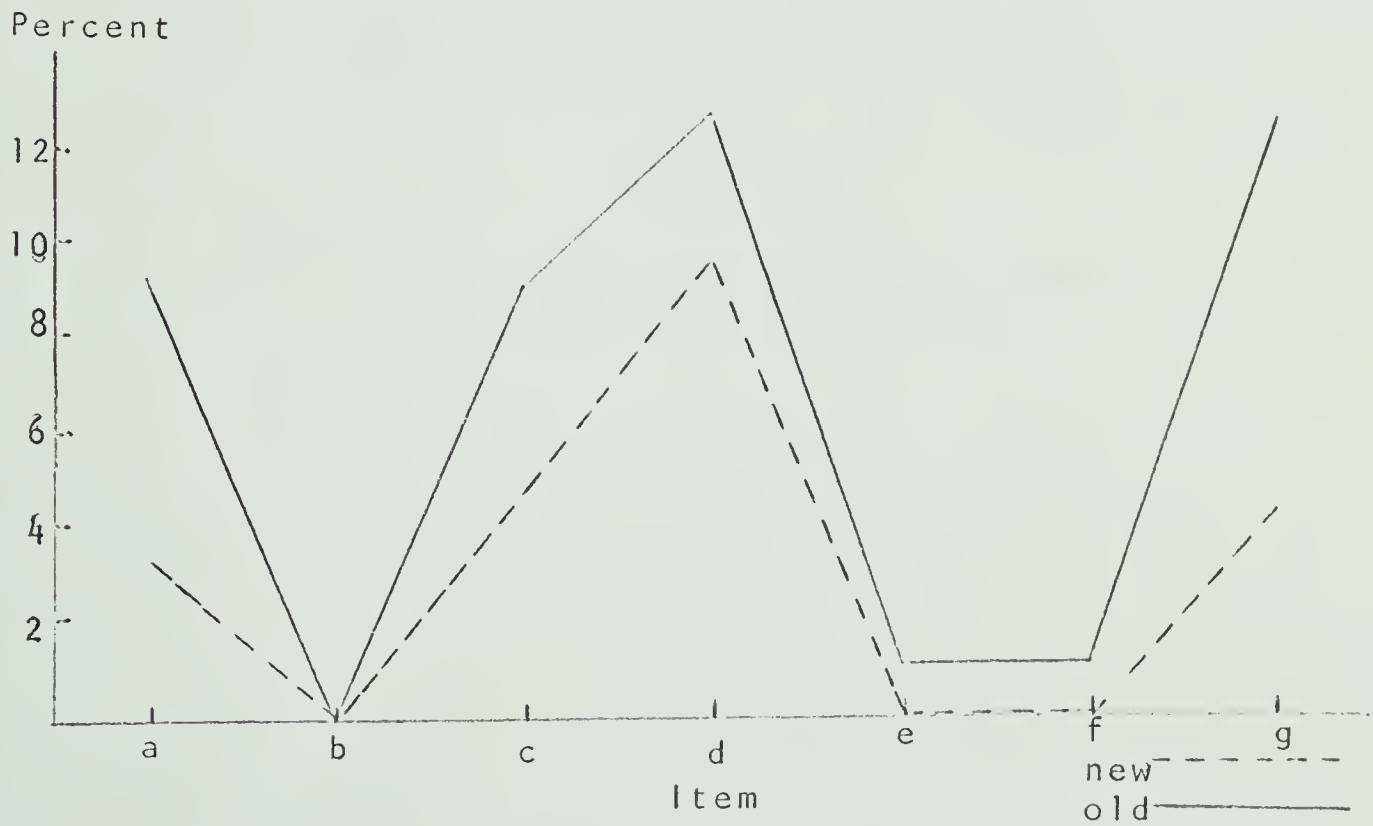


Figure 31  
Variation in Years of Operation:  
Area VI (Outdoor Facilities)



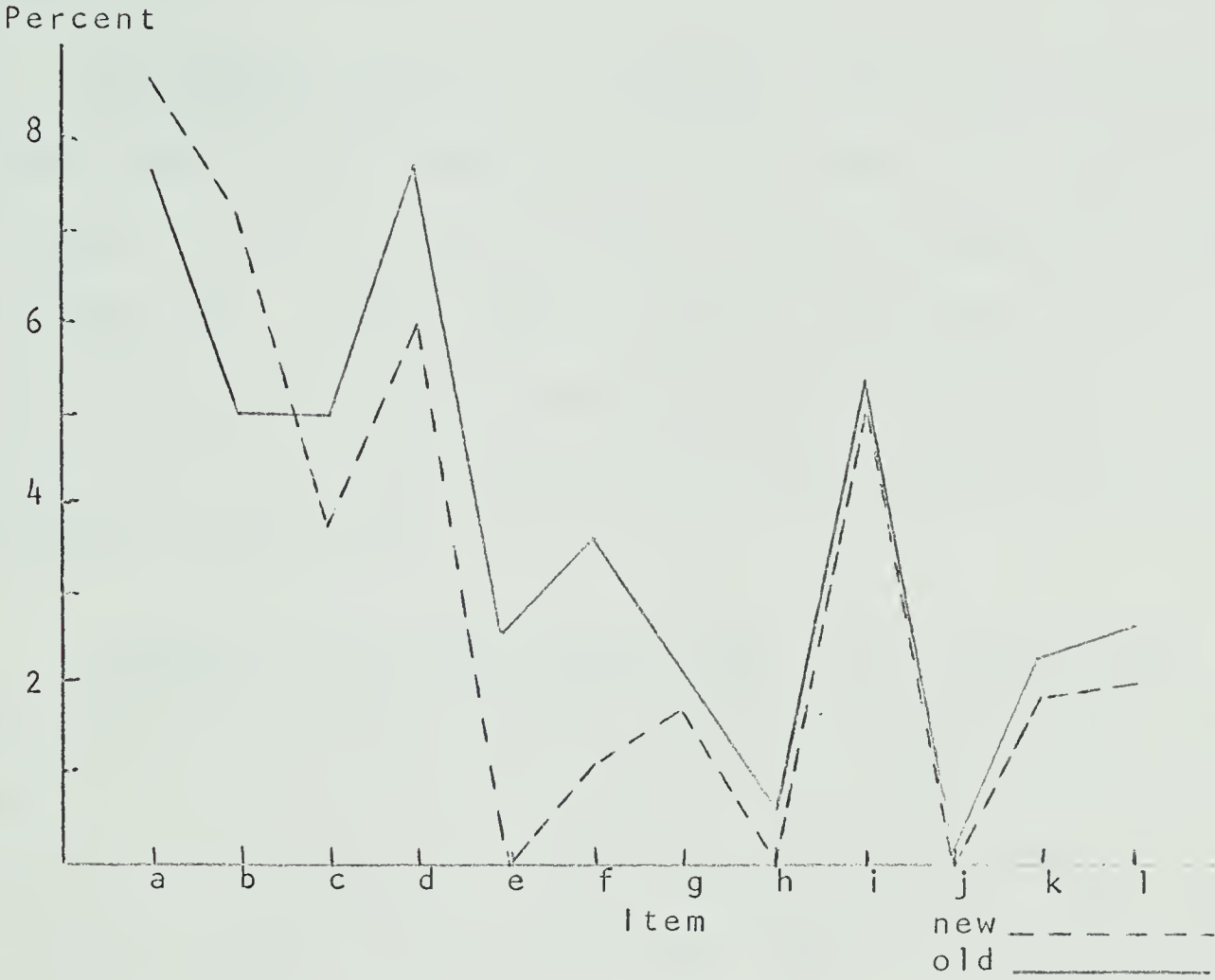


Figure 32

Variation in Years of Operation: Area VII  
(Equipment and Materials)



between newer and older schools. Older schools had slightly higher scores on pingminton bats, skipping ropes and climbing ropes and ladders.

Area VIII: intramural program. Although differences were not significant, older schools had superior scores on all aspects of the competitive part of the intramural program (see Figure 33). Older schools had more regulated intramural programs held after school hours, provided more opportunities for student leadership, and included more co-educational activities.

Area IX: athletic competition. Very significant differences (significant at the level .01) favored the older schools in the area of extramurals. New schools had very low scores on all items, while older schools achieved close to the maximum score in two of the four items. Figure 34 summarizes the area.

### School Authority

Thirteen schools set up by local branches of the Alberta Association for Retarded Children were compared to three schools under the control of municipal or provincial governments, to determine the effects of school authority and financial support upon the Physical Education program. Significant differences favoring the government schools were found in four of the nine areas, and one area resulted in non-significant differences favoring independent schools (see Table 17). The four areas resulting in significant differences





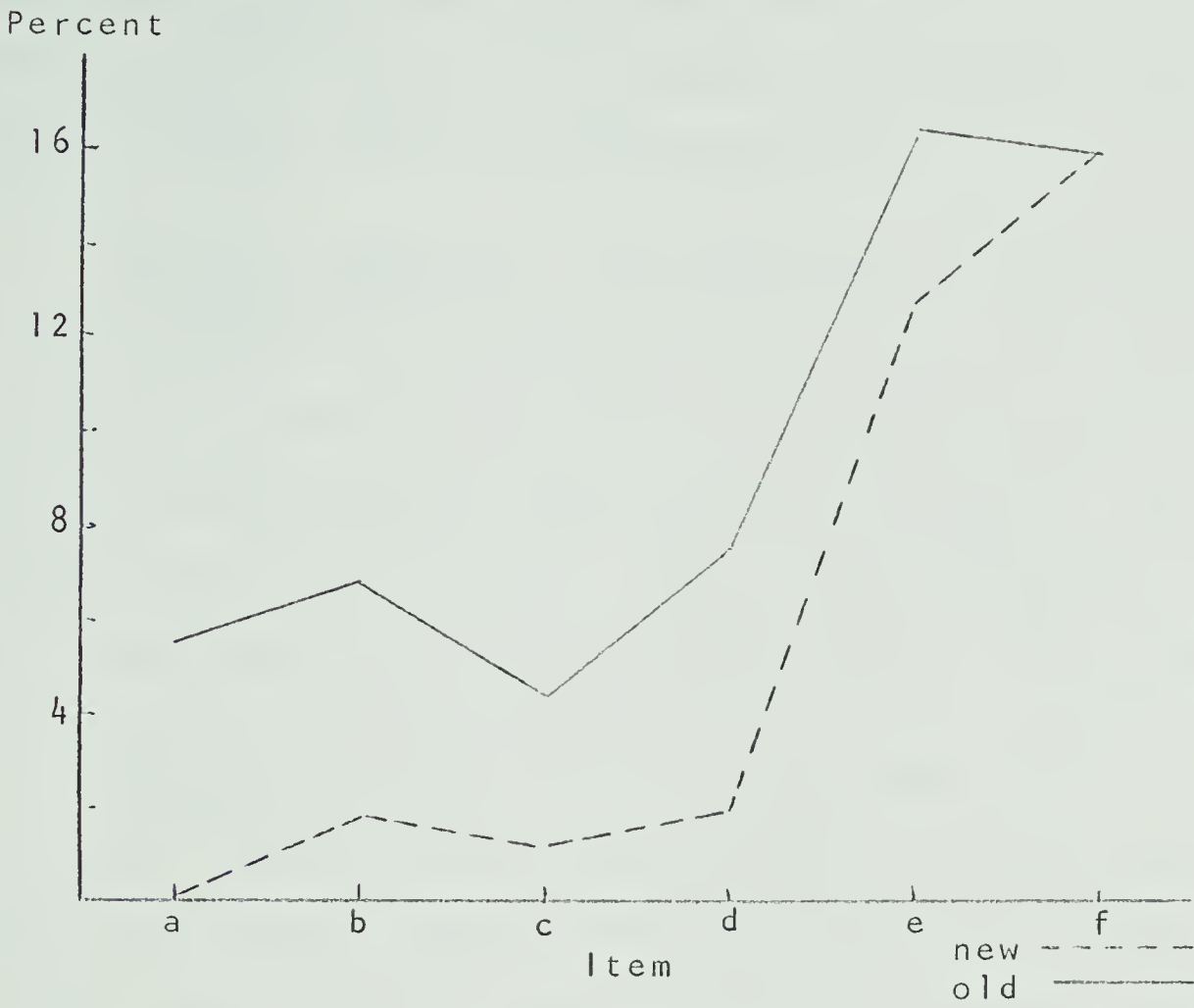


Figure 33

Variation in Years of Operation:  
Area VIII (Intramural Program)

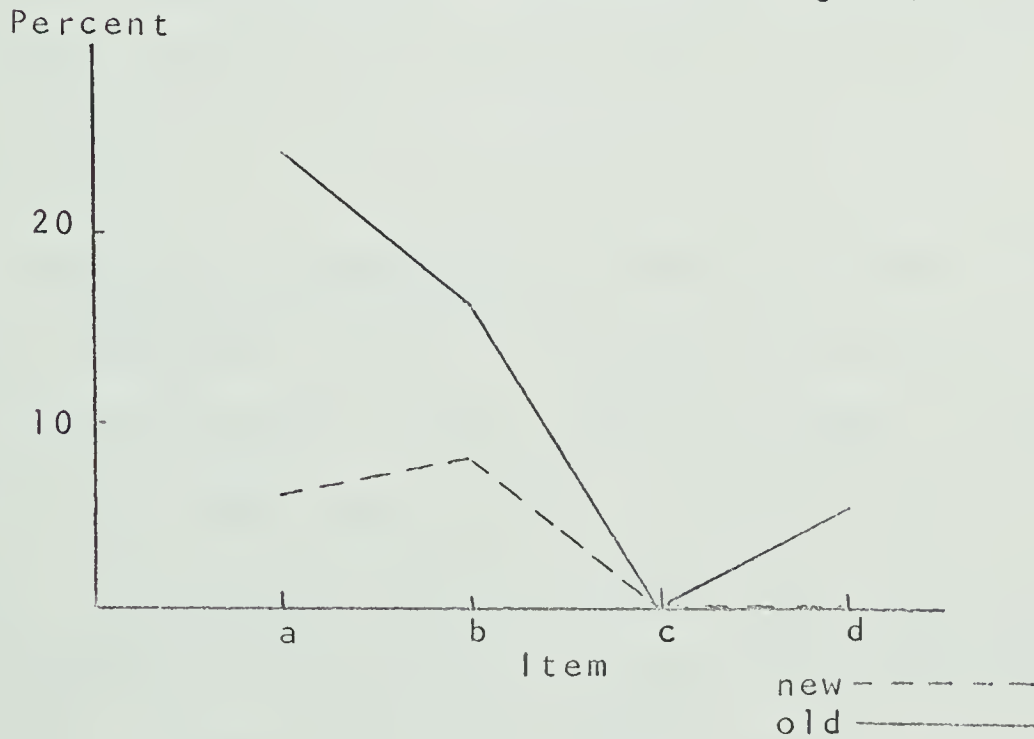


Figure 34

Variation in Years of Operation:  
Area IX (Extramural Program)



supported the hypothesis that government schools would have superior Physical Education programs, to those of independent schools. Figure 35 gives an area analysis.

Area I: policies. No significant differences resulted from comparison of schools in this area. All scores were very close as seen in Figure 36, although more government schools required medical examinations of students, and administered fitness tests twice a year. More independent schools had 81-100 percent of all ages taking part in the program.

Area II: staff. School scores were varied in this area (see Figure 37) but no significant differences were found. Government school instructors had more student teaching experience, and more in-service training than independent school staff, and more male instructors and volunteers were used in the programs. Independent schools had more university trained personnel and more staff with experience in normal schools.

Area III: procedures. Non-significant differences favored independent schools in this area, particularly in the items involving pupil-teacher ratios in games, gymnastics and dance for all ages, and ratios in swimming for less experienced swimmers. Government schools offered more opportunities for student planning and leadership, and more problem solving situations. Figure 38 summarizes the area.

Area IV: activities. Differences (significant at the



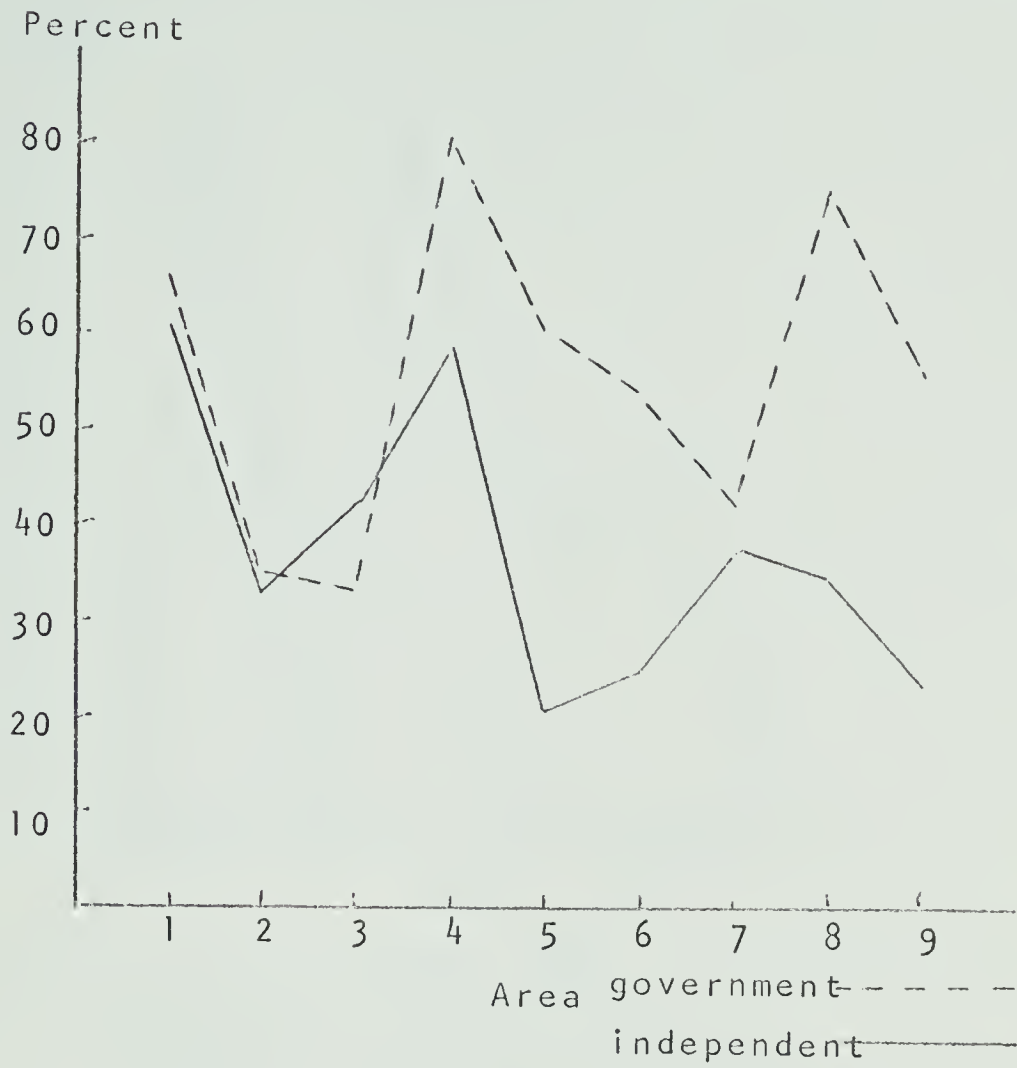


Figure 35  
Variation in School Authority: All areas

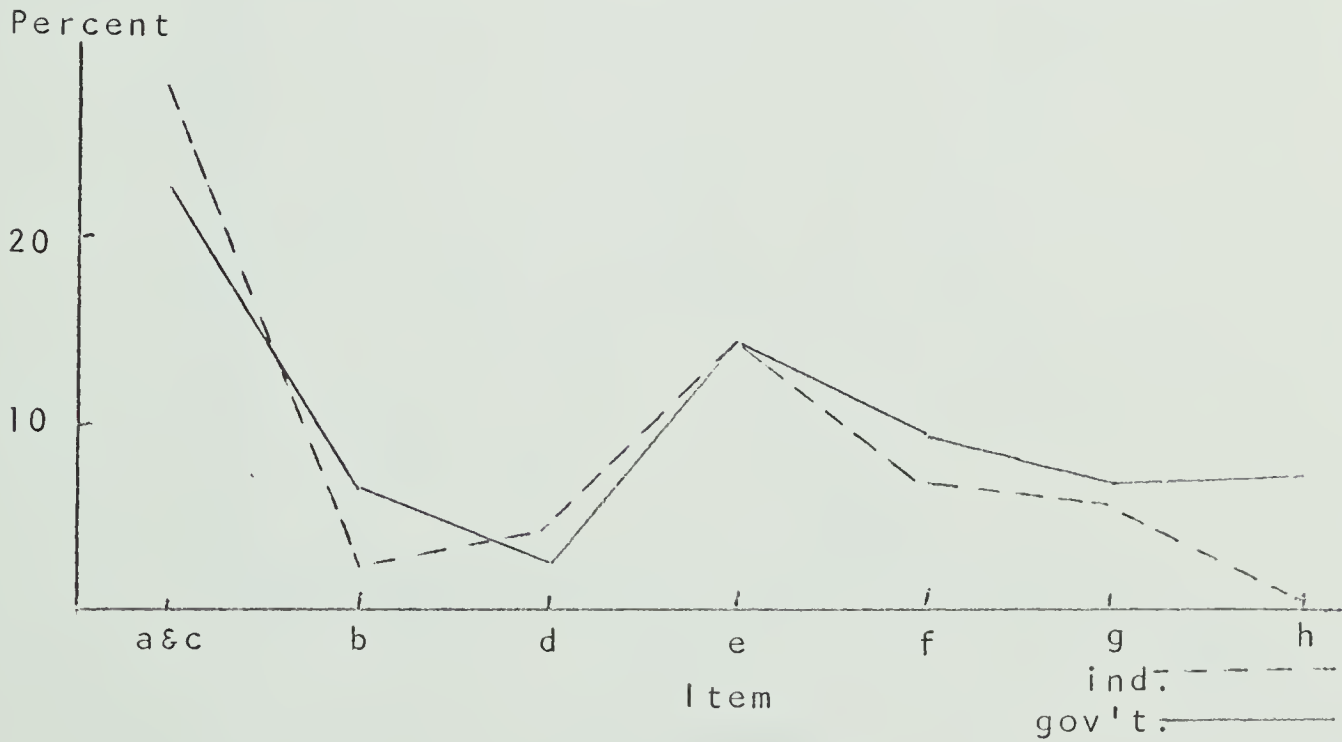


Figure 36  
Variation in School Authority:  
Area I (Policies)



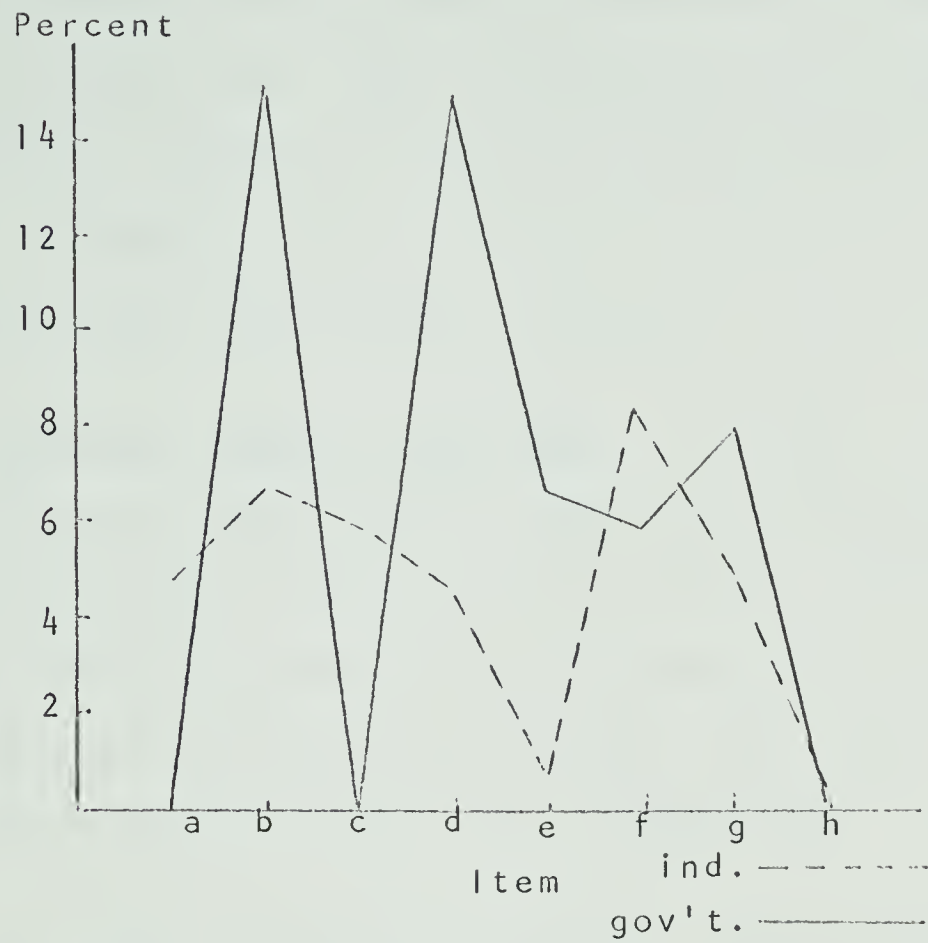


Figure 37  
Variation in School Authority:  
Area II (Instructional Staff)

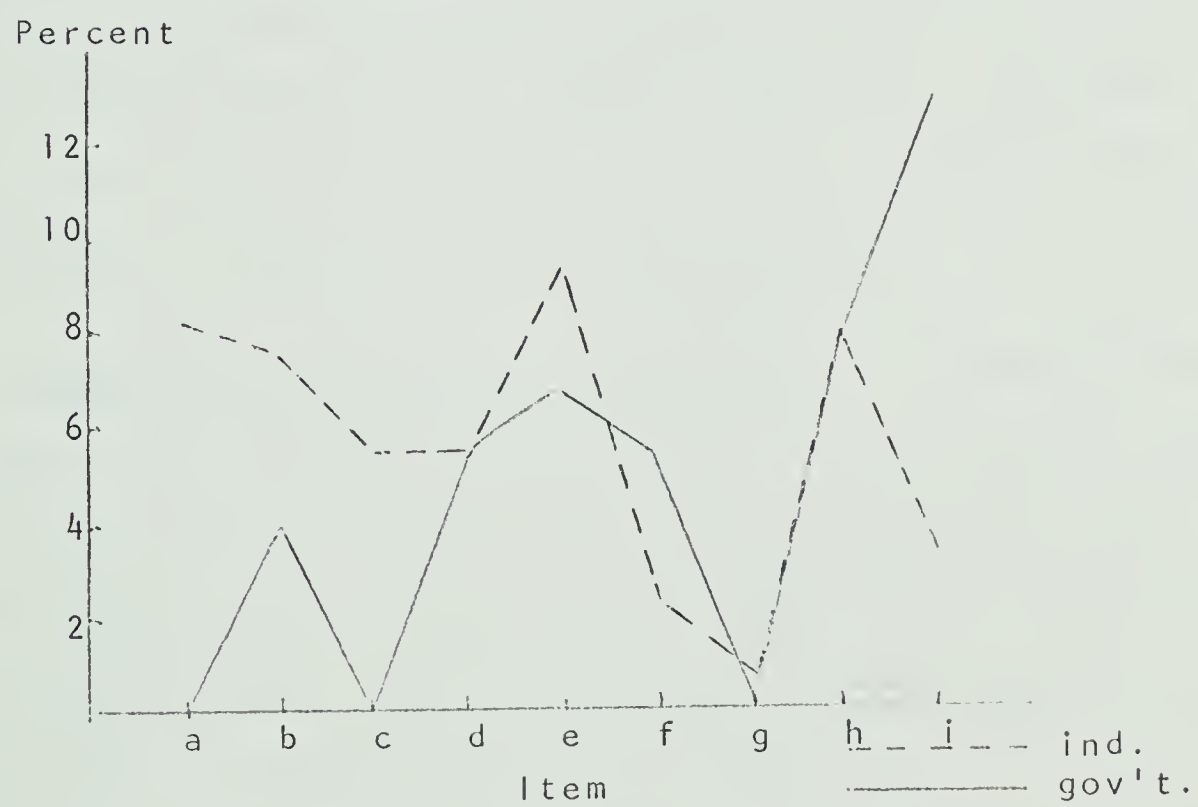


Figure 38  
Variation in School Authority: Area III  
(Procedures)





.05 level) were found in favor of government schools in this area (see Figure 39). Main differences were superior scores of government schools in activities with recreational carry-over, in swimming, and in specific programs for children under twelve years and twelve years and over.

Area V: indoor facilities. Government school indoor facilities were significantly superior to independent school facilities (significant at the .05 level). Main differences were seen in having adequate gymnasiums and teaching stations, in having physical education teachers' offices, and the use of available bowling alleys (see Figure 40).

Area VI: outdoor facilities. Government school outdoor facilities were also significantly superior (significant at the .05 level) to independent school outdoor facilities. More government schools had climbing apparatus, adequate playing areas, access to skating facilities, wading pools, and tennis courts. Figure 41 gives the analysis.

Area VII: equipment and materials. No significant differences were found between equipment of government and independent schools, and few observable differences were evident in Figure 42. Mean scores of government schools were superior to those of independent schools in six items, inferior in five items, and equal in one.

Area VIII: intramural program. Differences (significant at the .05 level) favored Government schools in the area of



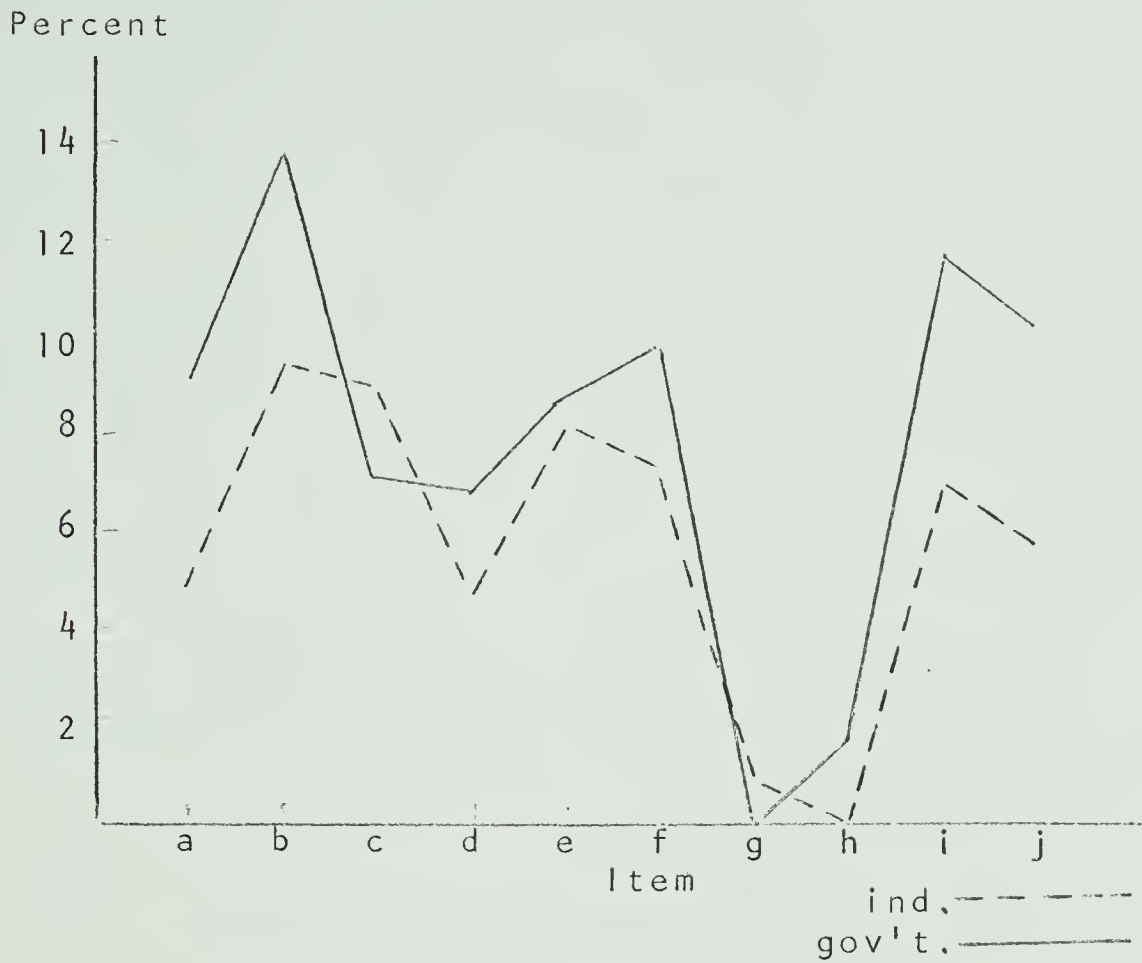


Figure 39

Variation in School Authority: Area IV  
(Instructional Program Activities)

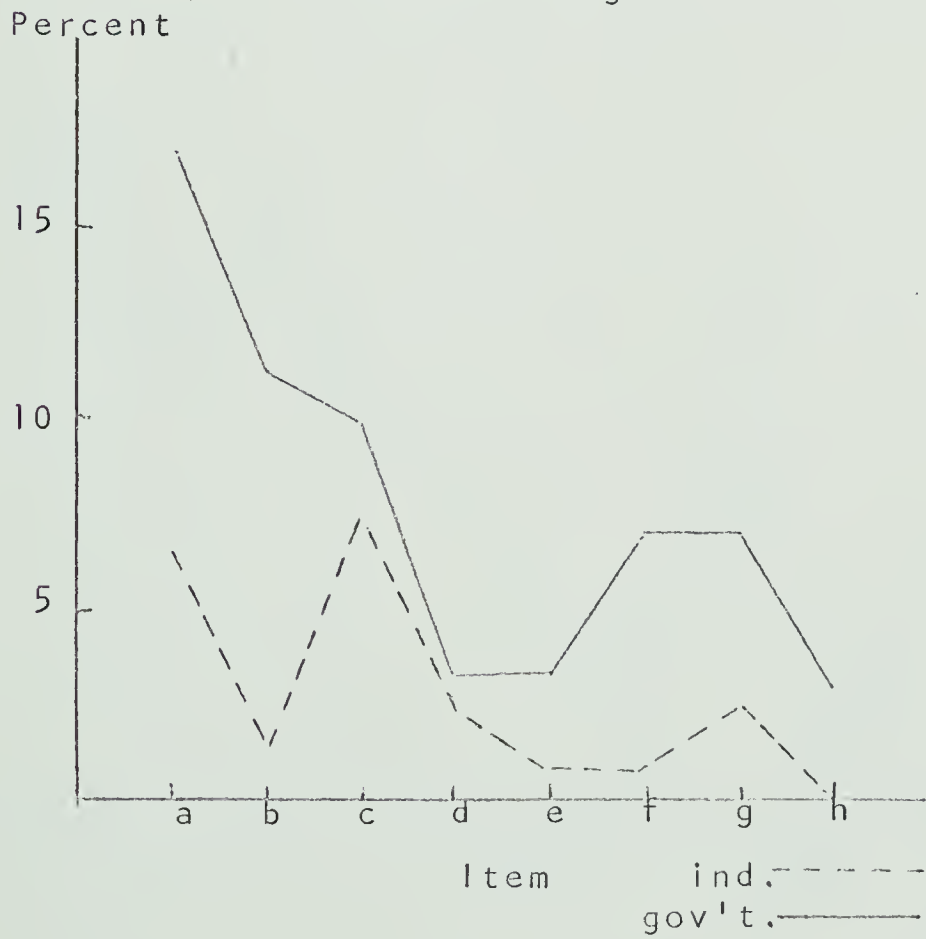


Figure 40

Variation in School Authority: Area V  
(Indoor Facilities)



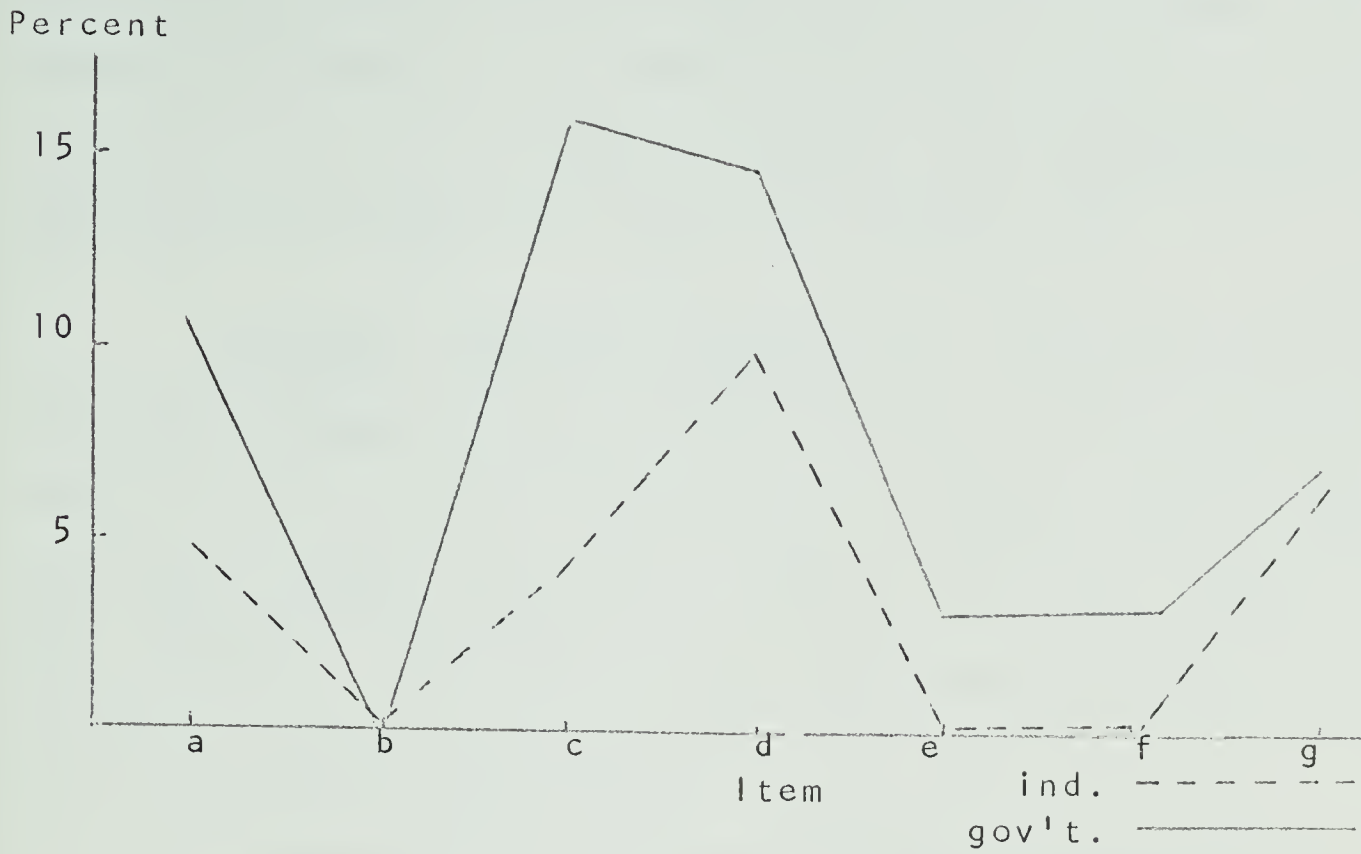


Figure 41  
Variation in School Authority: Area VI  
(Outdoor Facilities)

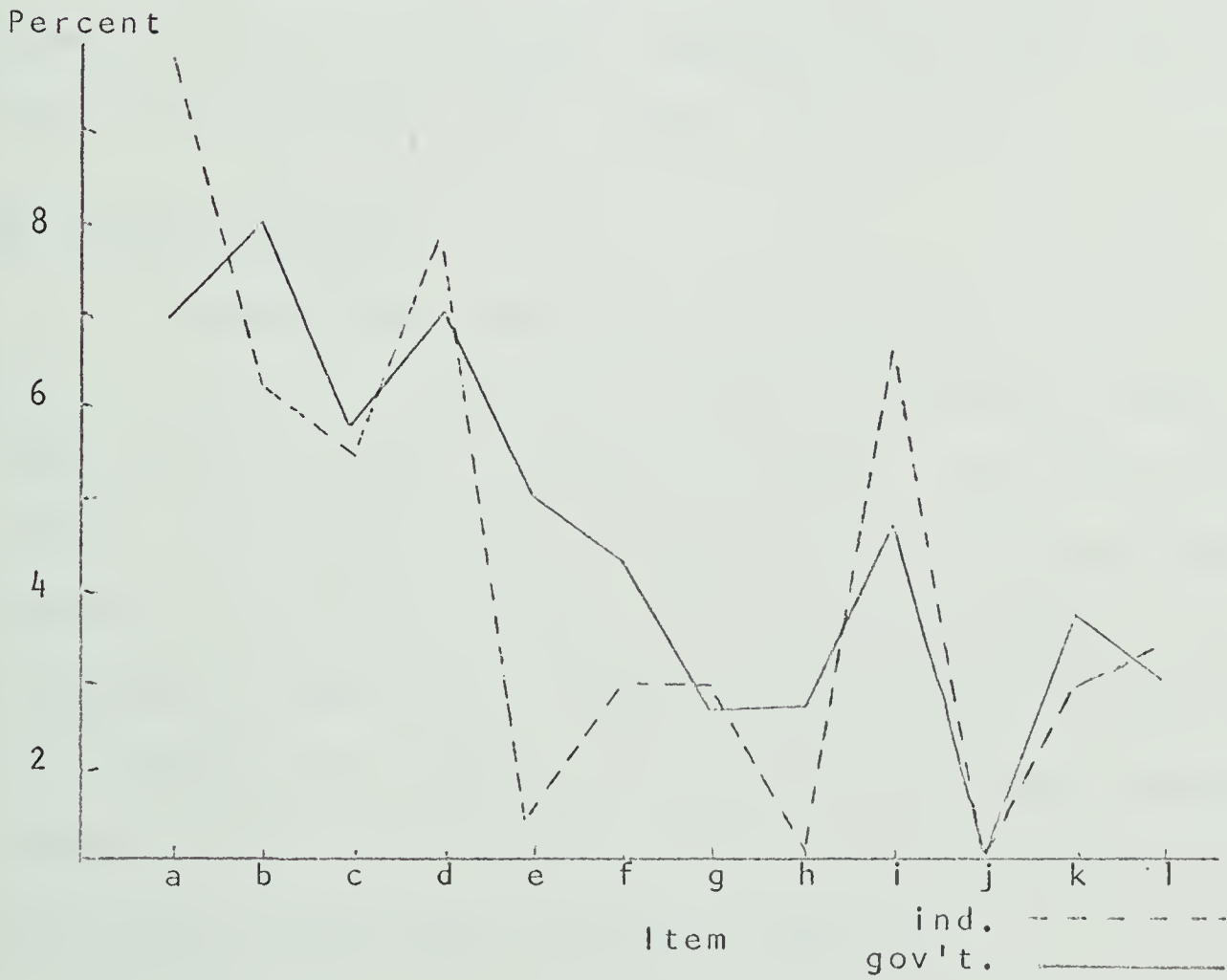


Figure 42  
Variation in School Authority: Area VII  
(Equipment Materials)



intramurals, particularly in the competitive program. More regulated intramurals were held in government schools, with trophies more often awarded to winners, and coeducational activities included more often (see figure 43).

Area IX: athletic competition. Large but non-significant differences seen in Figure 44 favored the government schools in this area. All government schools participated in occasional competitions with children from other schools for the retarded. Government schools also had a greater variety of activities participated in.

#### COMPARISON OF SCHOOLS IN COMBINED CATEGORIES

In determining the most important factors in quality of Physical Education programs, combinations of the four categories were graphed. The results appear below.

##### Size and Authority

Schools were combined into large government schools, large independent schools, and small independent schools (there were no small government schools). The large government schools had superior mean scores to those of large independent schools on all areas except staff, and were superior to small independent schools on all areas except policies (see figure 45). Small independent schools were inferior to large independent schools in all areas except policies and procedures. Therefore both size and government appeared important.





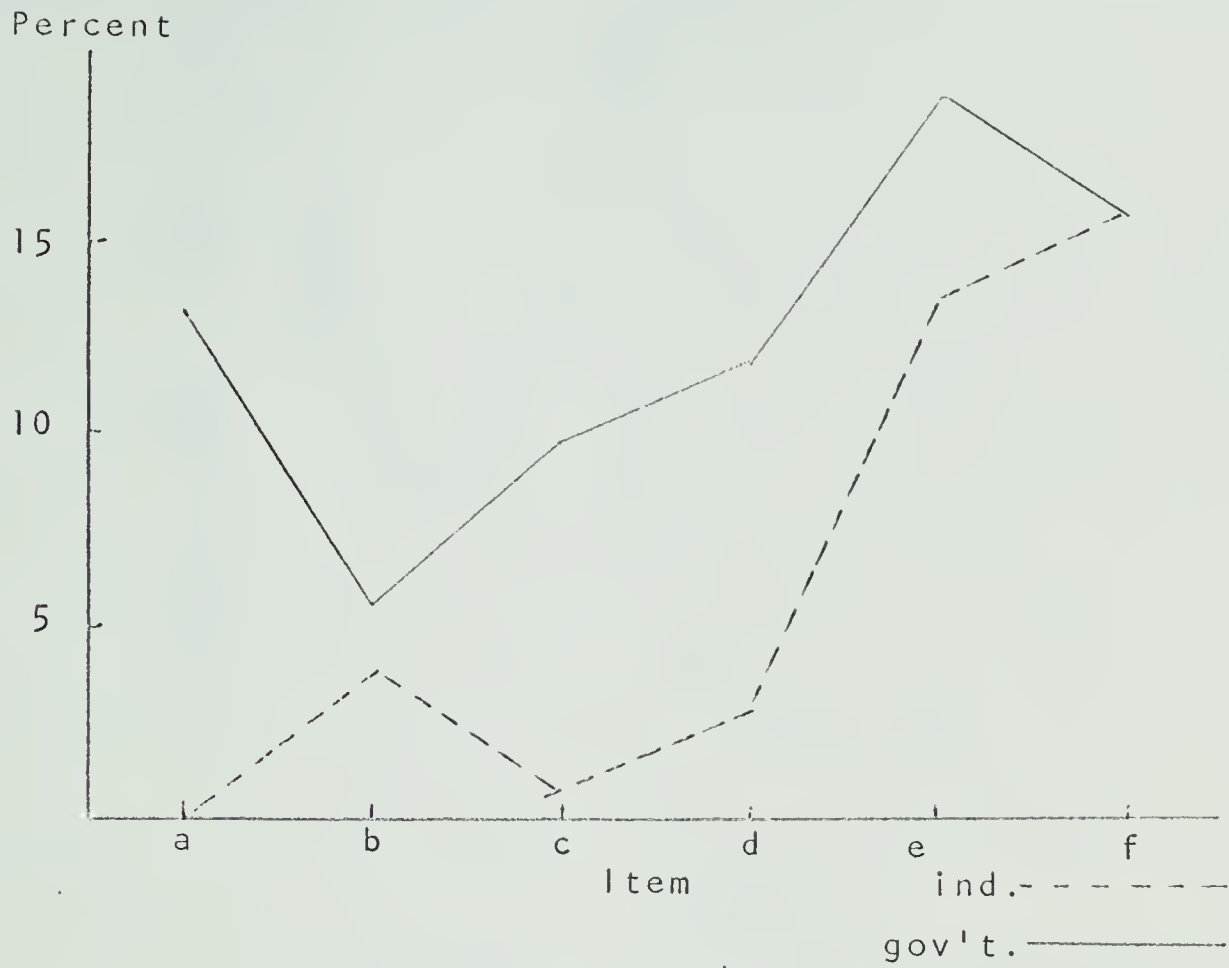


Figure 43

Variation in School Authority:  
(Area VIII (Intramural Program))

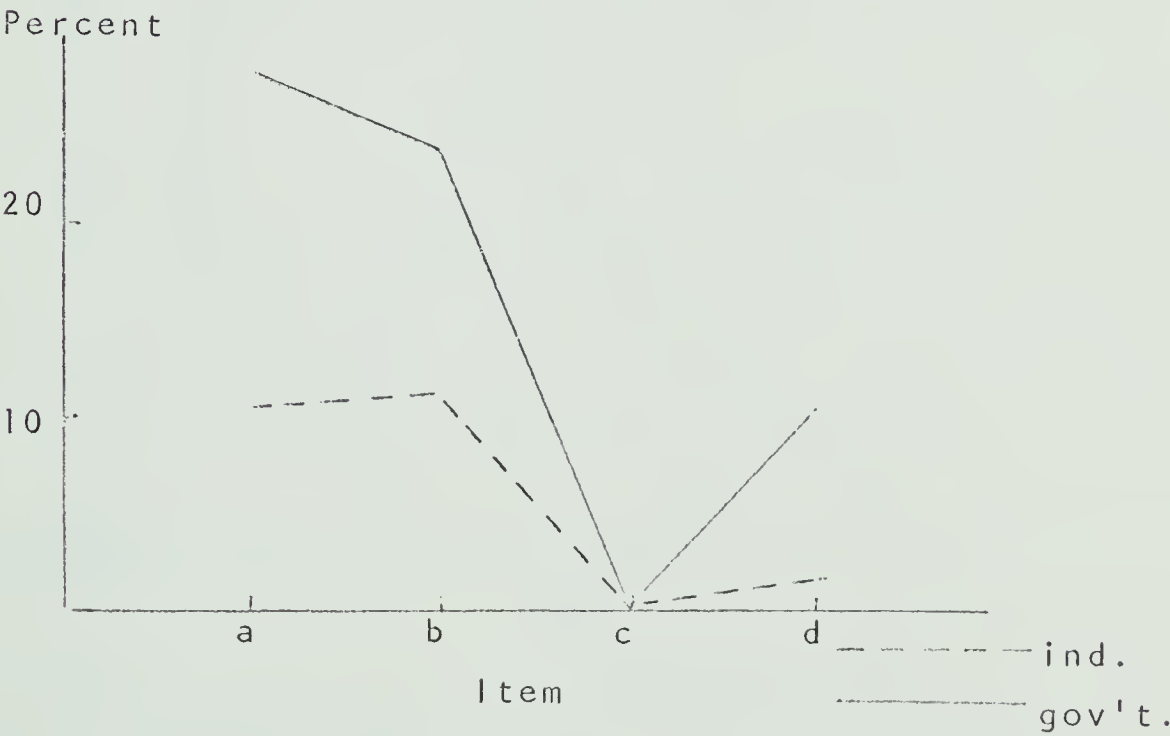


Figure 44

Variation in School Authority: Area IX  
(Extramural Program)



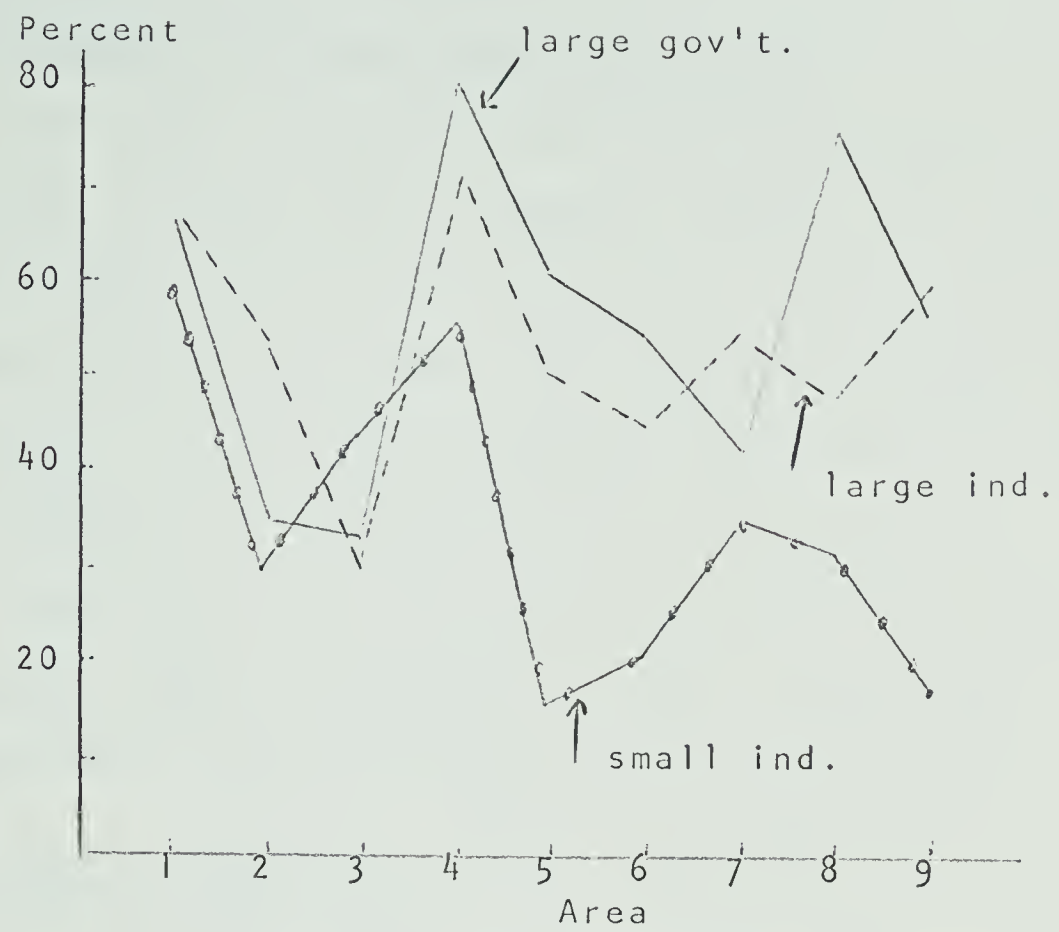


Figure 45  
Combination of Size and School Authority

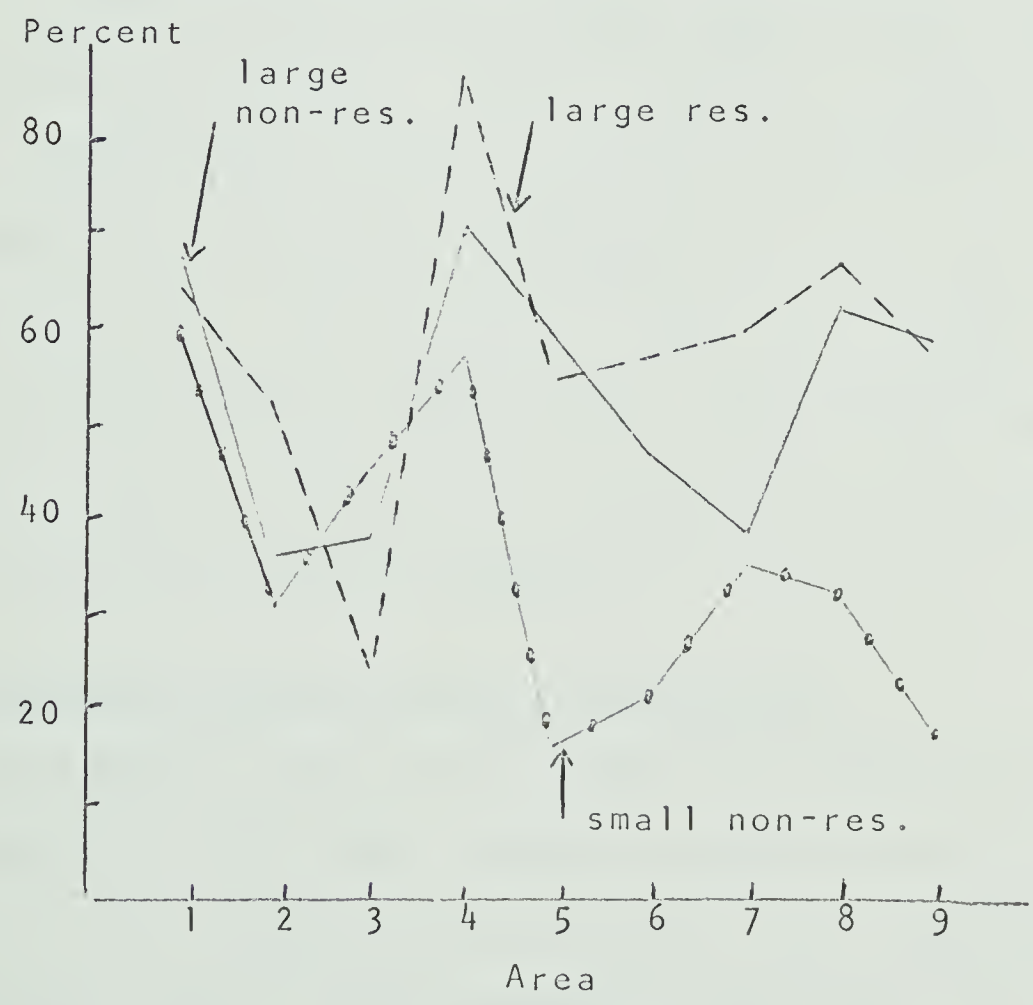


Figure 46  
Combination of Size and Residential Facilities



### Size and Residential Versus Non-Residential

When these categories were combined (no small residential schools), small non-residential schools were inferior to all large schools in all but one area--that of policies. Small non-residential schools were superior to both types of large schools in this area. Neither residential or non-residential schools were superior to each other overall, since each was superior in approximately one-half of the nine areas. Thus, the greatest difference was size, rather than residential facilities. Figure 46 gives the overall comparison.

### Size and Years of Operation

Figure 47 indicated that large older schools were superior to all others in every area except small new schools in the area of procedures. Small schools of varying age had very few differences. Large new schools were superior to all small schools in six areas and inferior to all small schools in three areas (II, III and VII). Small new schools were inferior to all others in four areas. Thus, size appeared to be a major factor, while years of operation differentiated schools only in the large category.

### School Authority and Residential Facilities

Residential government schools were seen in Figure 48 to be superior to all other schools except in areas III and IX. In III, non-residential government and independent schools were superior, and IX non-residential government and residential independent schools were superior. Independent residential



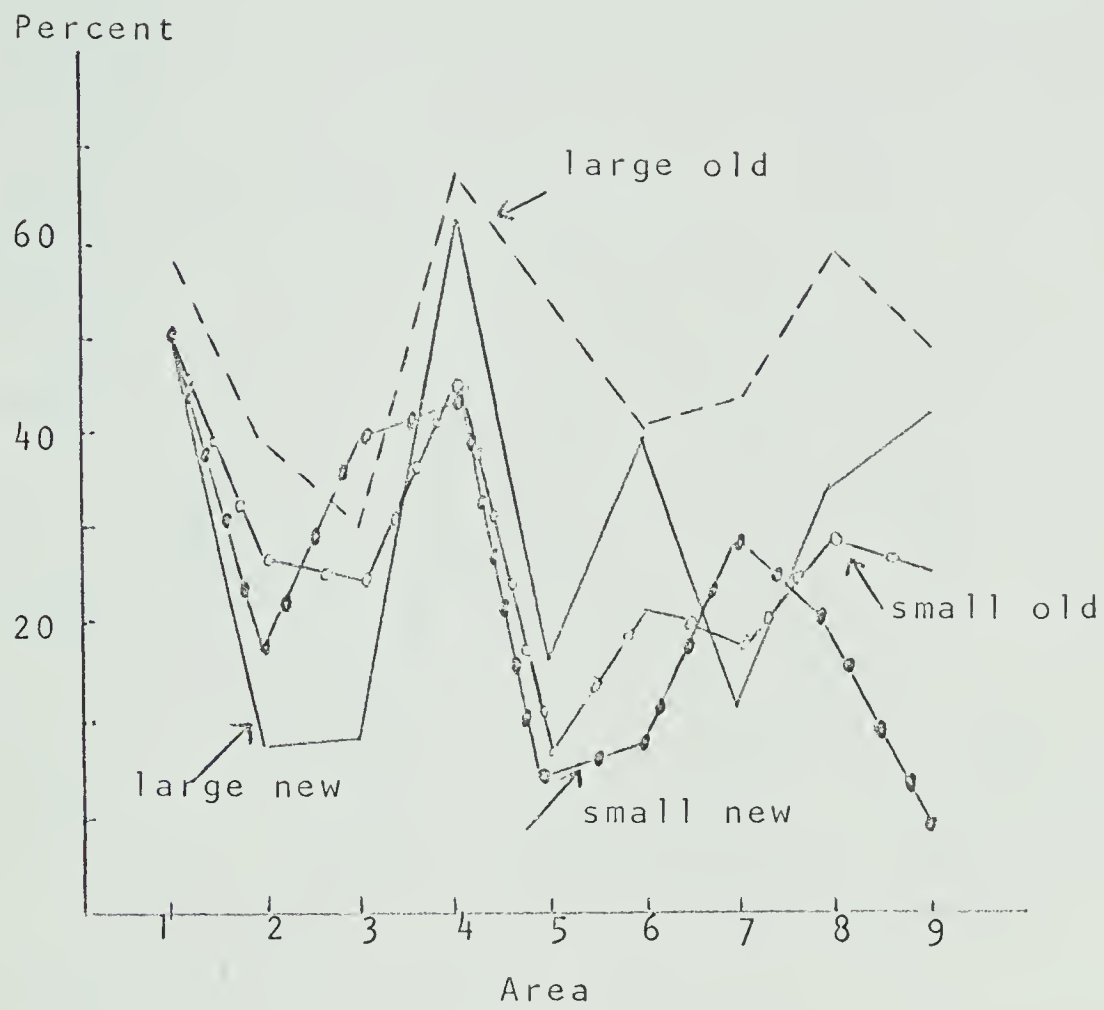


Figure 47

Combination of Size and Years of Operation







Figure 48

Combination of School Authority  
and Residential Facilities



schools were superior to independent non-residential schools in seven areas and inferior in two (I and III). Government non-residential schools were superior to all independent schools in four areas. Both school authority and residential facilities appeared important.

#### School Authority and Years of Operation

Older government schools were superior to all others in every area except III, where new independent schools were superior (see Figure 49). New government schools were superior to all independent schools in only three cases. Older independent schools were superior to all new schools in four areas. New independent schools were inferior to all others in six areas. Years of operation were important overall, but school authority was important only among older schools.

#### Age and Residential Facilities

Older residential schools were superior to all others in every area except III, where they were inferior to all others (see Figure 50). New non-residential schools were inferior to old non-residential schools in seven areas and equal in one. There were no new residential schools. Years of operation were again important.

#### Summary of the Combined Categories

The hypothesized factors were superior overall. Thus large, older, government residential schools had the highest scores in the survey. Large schools were superior in almost





Figure 49

Combination of School authority and  
Years of Operation



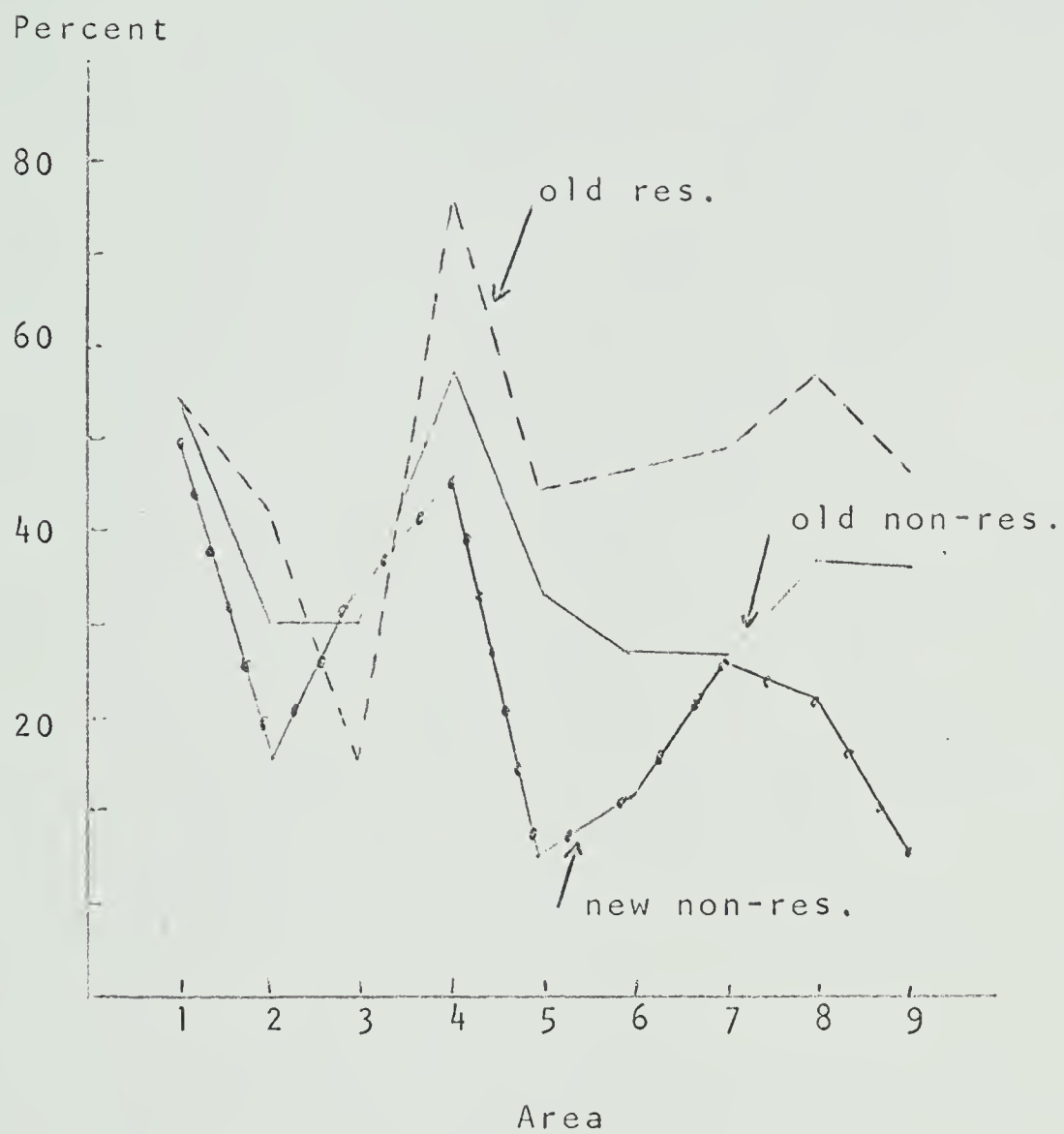


Figure 50

Combination of Residential Facilities  
and Years of Operation





every comparison, and small schools inferior in almost every case. Size appeared to be the major determining factor in program scores.



## CHAPTER V

### SUMMARY AND CONCLUSIONS

#### SUMMARY

The problem developed in this paper has been to investigate the physical education programs for trainable mentally retarded children in Alberta schools.

A descriptive instrument was developed by first reviewing relevant literature and making up a list of items mentioned in the literature as important in a physical education program for trainable mentally retarded children. A jury of Canadians was then selected, and three checklists containing the mentioned items were sent to the jurors to be accepted, rejected, or revised. The items in the final checklist were weighted on a percentile basis.

Eighteen schools in the Province of Alberta were found to include trainable mentally retarded children among their students. Questionnaires based on the jury's final checklist were sent to the principal of each of these schools. Sixteen schools completed the questionnaires.

Agreement of the jurors in weighting the final checklist, and the reliability of the school questionnaire were tested to determine the value of the results. Agreement was found among jurors' ranking of the nine areas in the final checklist, but little agreement appeared when percentage weightings were compared.



The reliability of the school questionnaire proved to be significantly high.

The general purpose of the study was to describe the present programs of physical education for trainable mentally retarded children in Alberta. It was also hoped that through this study, strengths and weaknesses could be isolated in the programs.

Since factors such as size, years of operation, school authority and residential facilities were deemed important in determining the quality of physical education programs, statistical treatment was applied to determine if there were significant differences among schools varying within these categories.

From this, four hypotheses were formulated. Firstly, that physical education programs in larger schools would be superior to those in smaller schools. Secondly, that physical education programs of older schools would be superior to those of new schools. Thirdly, that residential schools would have superior programs to non-residential schools. Finally, that government schools would have better programs than independent schools.

Holding the above factors constant, two further assumptions were tested. Firstly, there was assumed to be a positive relationship between amount of facilities and equipment, and program diversity. Secondly, there was a positive relationship assumed between teacher training and experience, and program diversity, implying that better qualified teachers would have better programs.



The major findings of the study can be divided into a general description of Alberta programs, and the factors determining program scores. All schools were found to include physical education in their curriculums. Relative to the juror's weightings, all area mean percents were low. Area I (policies) and Area IV (instructional program activities) resulted in the highest mean scores. Although Area II (instructional staff) was rated as the most important area by the jurors, it received very low scores in the survey.

The hypothesized relationships between extent of instructional program activities and other parts of the program were supported in one instance but not in the other. A positive relationship was observed between amount of facilities and equipment, and diversity of activities. No relationship was found between qualifications and preparation of staff and diversity of activities.

Size appeared to be the most important factor in producing differences between school scores. Large schools had generally higher scores than small schools on all parts of the program except procedures (Area III). A comparison of residential facilities produced the fewest significant differences.

Once the results were tabulated, a summary of the findings was sent to all participating jurors and schools.

### Conclusions

In general, the average scores achieved by the sixteen schools were well below the maximum possible scores established





by the jury. The instructional programs appeared to be very inadequate.

It can be concluded that standards of physical education programs in Alberta schools for trainable mentally retarded children are low. Specific deficiencies appear in amount and quality of personnel preparation, availability of facilities and equipment, procedures followed, and competition outside of the instructional program.

It is further concluded that a greater percentage of Alberta trainable mentally retarded children have physical education instruction than did American children in Brace's study (11). All Alberta schools offered physical education instruction, while only 65% of primary schools and 80% of elementary schools offered physical education in the United States.

Various factors were found to result in improved physical education programs in Alberta schools. It was concluded that larger schools had better programs than smaller schools. Also, older schools had better programs than newer schools, and government schools had better programs than independent schools. Residential schools offered slightly better programs than did non-residential programs. The exception to the above, was the small schools' higher scores in the area of Procedures (Area III). It was concluded that the smaller schools had lower pupil-teacher ratios due to smaller enrollment. These ratios made up a large portion of the total score for Area III.

A possible explanation of the superiority of larger schools' programs may be that larger schools require more



facilities and equipment to accommodate the students, resulting in greater program diversity. More children would also be available to participate in intramural and extramural competition.

Government schools may have had superior programs due to greater availability of facilities and equipment. More certified teachers were also found in government schools than in independent schools.

Older schools have had more time to accumulate facilities and equipment than have newer schools. They also have had time to establish workable policies and procedures, and discover successful activities.

Few significant differences were found between residential and non-residential schools. This may be because one of the schools was only partially residential. However, residential schools were noticeably superior to non-residential schools in most areas.

In conclusion, physical education standards were found to be highest in schools with fifty or more students, in residential schools, in schools more than ten years old, and in schools operated by government agencies.

The major focus of physical education administration and school authorities should be on schools of fifty or fewer students. These schools had low scores on almost all items except pupil-teacher ratios. These ratios were lower than in larger schools, and probably result in more individual attention to students.

A second major concern is the lack of trained physical



education staff in Alberta special schools. Several schools stressed the need for higher salaries to attract qualified personnel.

### Recommendations

Following are a number of recommendations based on the results of this study.

In-service training seminars, to assist schools with limited physical education programs, should be conducted throughout the province. These seminars should be sponsored by the Alberta Association for Retarded Children and the provincial government, in conjunction with Alberta universities.

A summary of current research in the area of physical education for the retarded should be made available to all physical education teachers in the province.

Some organizational structure should be sought to accommodate schools with small enrollments in larger educational units. One suggestion is the inclusion of trainable mentally retarded children in public schools. This has been done in Calgary and in other provinces with some success.

Health services in schools should be enlarged to include compulsory medical examinations for all children prior to beginning physical education each year. Cumulative medical records should be kept for each child.

Increased physical education instructional time is necessary if children are to receive the full benefits of the program. The Canadian Association for the Mentally Retarded has recommended a minimum of thirty minutes per day (not including



showering and changing). This should be a minimum standard.

Research is needed to discover the validity of the literature and of the jurors' opinions. Information is not available to factually support every item in the questionnaire.

Further research could also be done repeating the method used in this study, but using only physical education teachers of trainable retarded children in the jury, rather than the diversified group used in this study.





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## APPENDIXES



APPENDIX A  
STATISTICAL TREATMENT



AGREEMENT OF THE JURY

Kendall Coefficient of Concordance Test

The Kendall Test (Siegel, 55:234) was used to find agreement of the jurors in ranking the major areas of the third checklist. It is a nonparametric measure of correlation of ordinal data.

METHOD:

The percent weightings assigned to the nine areas by each juror were changed to ranks of 1 to 9--the highest percent weighting receiving 1, and so on. "W" was then computed and its significance tested by a  $x^2$  formula.

JURORS	AREAS								
	I	II	III	IV	V	VI	VII	VIII	IX
1	3	1	5.5	3	5.5	7	3	8	9
2	1.5	1.5	5	5	5	5	5	8	9
3	2	1	3	6	6	6	6	6	9
4	3.5	1	2	3.5	7	7	7	7	7
5	5	1.5	8	5	5	8	3	1.5	8
6	7.5	7.5	2	1	5	5	5	3	9
7	1	2.5	2.5	6	6	6	4	8	9
8	5.5	1	5.5	2	5.5	5.5	5.5	5.5	9
9	7.5	1	5.5	2.5	5.5	5.5	2.5	7.5	5.5
10	8	1	8	2	4.5	4.5	4.5	4.5	8
11	7	1	7	4	4	4	2	7	9
$R_j$	51.5	20	54	40	59	63.5	47.5	66	91.5

N = 9

K = 11

$\sum R_j = 493.0$





Kendall (continued)

$$\begin{aligned}
 S &= (R_{j_1} - \frac{\sum R_j}{N})^2 + (R_{j_{11}} - \frac{\sum R_j}{N})^2 + \dots + (R_{j_{1X}} - \frac{\sum R_j}{N})^2 \\
 &= (51.5 - \frac{493}{9})^2 + (20 - \frac{493}{9})^2 + \dots + (91.5 - \frac{493}{9})^2 \\
 &= 3060.56
 \end{aligned}$$

$$\begin{aligned}
 W &= \frac{S}{\frac{1}{12} K^2 (N^3 - N) - \frac{K \sum T^3}{T}} \\
 &= \frac{3060.56}{\frac{1}{12} 11^2 (9^3 - 9) - 11 (65)} \\
 &= .47
 \end{aligned}$$

$$\begin{aligned}
 x^2 &= K(N-1)W \\
 &= 11(8) .47 \\
 &= 41.36
 \end{aligned}$$

$$\begin{aligned}
 df &= N-1 \\
 &= 8
 \end{aligned}$$

If  $x^2 \geq 20.09$ , it is significant at  $\alpha = .01$ .

∴ Agreement of the jurors was significant at .01 level.

---

\*  $\sum T$  = correction for tied ranks.



## ODD-EVEN RELIABILITY COEFFICIENT

The reliability of the actual percent weightings assigned to the major areas in the third checklist was tested using the method outlined by Ferguson (26:377). The odd-even procedure was used and then corrected using the Spearman-Brown formula.

METHOD: (Example using Area 1)

x	y	$x^2$	$y^2$	xy
15	20	225	400	300
20	15	400	225	300
10	8	100	64	80
20	10	400	100	200
5	5	25	25	25
<u>8</u>	<u>12.4</u> (the average weighting)	<u>64</u>	<u>153.8</u>	<u>99.2</u>

$$\sum x = 78 \quad \sum y = 70.4 \quad \sum x^2 = 1214 \quad \sum y^2 = 967.8 \quad \sum xy = 1004.2$$

$$\begin{aligned}
 r &= \frac{n \sum xy - (\sum x)(\sum y)}{\sqrt{n \sum x^2 - (\sum x)^2} \sqrt{n \sum y^2 - (\sum y)^2}} \\
 &= \frac{6 (1004.2) - (78)(70.4)}{\sqrt{6 (1214) - (78)^2} \sqrt{6 (967.8) - (70.4)^2}} \\
 &= .529
 \end{aligned}$$

Correction: Spearman-Brown Formula

$$Y \text{ corrected} = \frac{2r}{1+r} = \frac{2 (.529)}{1+.529} = .69$$



## RELIABILITY OF THE SCHOOL QUESTIONNAIRE

Spearman-Rank Correlation Coefficient

This test was chosen to measure the nonparametric ordinal data resulting from retesting three representative schools. (Siegel, 55:206)

METHOD: (Example using School #6)

Area	Test x	Re-test y	Rank		d1	d1 <sup>2</sup>
			x1	y1		
I	61.5	61.5	2	2	0	
II	20	20	8	8	0	
III	31	31	7	6	+1	1
IV	76	70	1	1	0	
V	37	37	5	5	0	
VI	32	30	6	7	-1	1
VII	54	47	3	4	-1	1
VIII	16	16	9	9	0	
IX	52	60	4	3	+1	1

$$\sum d1^2 = 4$$

$$N = 9$$

$$r_s = 1 - \frac{6 \sum d^2}{N^3 - N}$$

$$= 1 - \frac{6(4)}{(9)^3 - 9}$$

$$= .967$$

$r_s$  is significant at  $\alpha = .01$ , if  $r_s \geq .783$ .

∴ The school questionnaire was significantly reliable.



## COMPARISON OF SCHOOLS WITHIN CATEGORIES

The Mann-Whitney U Test (Siegel, 55:119) was chosen to determine the significance of differences between schools due to the four factors of size, residential facilities, age, and authority.

## METHOD:

ie. Differences in Area I due to size of school.

Ho: Large schools will achieve higher scores in Area I (Policies) than will small schools.

$N_1 = 5$  (large schools) ;  $S_1 =$  large scores

$N_s = 11$  (small schools) ;  $S_s =$  small scores

$d = .01$                       U     7

$= .05$                       U     12

$S_s$	Rank <sub>s</sub>	$S_1$	Rank <sub>1</sub>
51	3	57	6
48	2	66	11
61.5	9.5	60.5	8
76	14	72	13
79	16	77	15
61.5	9.5		
53.5	5		
53	4		
59	7		
44.5	1		
67	12		

$$R_s = 83.0$$

$$R_1 = 55.0$$

$$\begin{aligned}
 U &= \frac{N_1 N_s + N_1 (N_1 + 1)}{2} - R_1 \\
 &= (5 \times 11) + \frac{5 (5+1)}{2} - 55 \\
 &+ 15
 \end{aligned}$$

There are no significant differences in Area I scores due to size.





APPENDIX B  
FIRST CHECKLIST



INITIAL LETTER AND INSTRUCTIONS FOR  
FIRST CHECKLIST

#301, 8510 - 111 St.  
Edmonton 61, Alberta  
April 17, 1969

Dear

I am presently working on a Master of Arts degree in Physical Education at the University of Alberta (Edmonton.) My area of interest is Adapted Physical Education, specifically physical education for the mentally retarded.

I have chosen to do my thesis in this area, and am planning to survey and evaluate physical education programs for mentally retarded children in Alberta. To do this, I must first devise an evaluating technique which represents the Canadian ideal physical education program for trainable retardates. The evaluating technique used will be a score card with items rated in importance by a jury of Canadian authorities. The jury will be made up of approximately fifteen members including university personnel, school board administrators, teachers, and recreation administrators selected according to their interest, training, and experience in working with mentally retarded children.

Your assistance in this project as a member of the jury would be greatly appreciated. The total time involvement will be about two hours. Three checklists, including the enclosed one, will be sent to you to evaluate and return. The final score card will thus be based on the pooled philosophies of the jurors. A brief outline of the project is enclosed, and final results of it will be mailed to you when completed.

Thank you in advance for your assistance in helping to make this study worthwhile and successful.

Sincerely yours,

Brenda Shedden



## OUTLINE OF THE STUDY

The purpose of this study is to survey and evaluate physical education programs for trainable mentally retarded children in Alberta. Improvements in the programs can not be made until present weaknesses are found.

The study will be limited to those programs for school-age children in special schools for retardates and will not include special classes in public schools. Eighteen schools will be evaluated using the score card developed by the jury. The results will then be analysed and correlations determined between several variables involved. Results of the study will be mailed to each school involved so that the staff can compare their program with others in the province. The scores on the various parts of the program will indicate what needs attention for program improvement.

### PROCEDURE FOR DEVELOPING THE FINAL SCORE CARD

1. Preliminary checklist: items are rated as to their importance in a successful physical education program. The evaluation should be based on what each juror considers to be the ideal, rather than the present standard. Items included in this checklist are the results of a review of literature regarding programs in Canada and the United States.
2. Second checklist: those items accepted as important by the jurors plus any suggestions made by the jurors are again rated.



3. Final score card: those items and suggestions accepted in the second checklist will make up a score card. This score card will be weighted by the jurors.

#### PRELIMINARY CHECKLIST

The nine major areas and items listed under each area are to be rated as to their importance in developing the ideal physical education program for trainable mentally retarded children in special schools.

The rating scale to be used is as follows:

- 0 . . . . . undesirable in the program.
- 1 . . . . . unnecessary in the program.
- 2 . . . . . desirable in the program.
- 3 . . . . . essential in the program.
- 4 . . . . . indispensable in the program.

A rating of 2 or higher is needed in order to accept an area or item in the score card. This means the average score of all the jurors on each item and area must be 2 or higher.

Space is provided at the end of each major area for jurors' suggestions. These suggestions may question the method of stating an item, or may add to the list of items. All suggestions will be appreciated.

Two copies of the checklist are included so that you may keep one to compare with subsequent mailings.

Please rate the following items and areas and return the checklist in the self-addressed envelope provided as soon as possible. Thank you again.





FOLLOW-UP LETTER FOR  
FIRST CHECKLIST

# 301, 8510 - 111 St.  
Edmonton 61, Alberta  
April 30, 1969

Dear

With reference to my letter of April 17, 1969, I am presently trying to process the returns of the first questionnaire in order to adjust it for second mailing. To date, I have not received your questionnaire and would appreciate the return of it by return mail if possible. If the questionnaire is already in the mail, please disregard this letter.

As you are probably very busy at this time of year, I thank you for the time taken to help me in my project.

Sincerely yours,

Brenda Shedden



## FIRST CHECKLIST

- 0 - undesirable  
 1 - unnecessary  
 2 - desirable  
 3 - essential  
 4 - indispensable

## IMPORTANCE RATING

I	POLICIES AND PROCEDURES	0	1	2	3	4
a)	All children attending school take part in a regular physical education program.	0	1	2	3	4
b)	All children have a medical examination before the program begins.	0	1	2	3	4
c)	Children with poor health or physical handicaps are placed in regular physical education classes.	0	1	2	3	4
d)	Children with poor health or physical handicaps are placed in special physical education classes.	0	1	2	3	4
e)	Children with poor health or physical handicaps are exempted from physical education classes.	0	1	2	3	4
f)	Each child has at least forty-five minutes of physical education per day.	0	1	2	3	4
g)	Physical education classes continue from age five to at least age twenty.	0	1	2	3	4
h)	Children change into appropriate gym clothing.	0	1	2	3	4
i)	Records be kept from year to year on each child's progress and medical status.	0	1	2	3	4
j)	Fitness testing of students be done at least twice a year	0	1	2	3	4
k)	Homogeneous classes based on mental and chronological age, and physical maturity be employed.	0	1	2	3	4



FIRST CHECKLIST (continued)

- 0 - undesirable
- 1 - unnecessary
- 2 - desirable
- 3 - essential
- 4 - indispensable

IMPORTANCE RATING

SUGGESTIONS:

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II	INSTRUCTIONAL STAFF	0	1	2	3	4
	a) University degree in:					
	1. regular physical education area.	0	1	2	3	4
	2. special emphasis on adapted physical education	0	1	2	3	4
	3. special education	0	1	2	3	4
	b) Student teaching experience with mentally retarded children prior to teaching on a permanent basis	0	1	2	3	4
	c) Previous experience in teaching physical education to normal children.	0	1	2	3	4
	d) In-service training while teaching retardates.	0	1	2	3	4
	e) Male physical education teacher for boys.	0	1	2	3	4
	f) Female physical education teacher for girls.	0	1	2	3	4
	g) Use of volunteers to supplement instructional staff.	0	1	2	3	4
	h) Use of less qualified staff to supplement instructional staff.	0	1	2	3	4



FIRST CHECKLIST (continued)

- 0 - undesirable
- 1 - unnecessary
- 2 - desirable
- 3 - essential
- 4 - indispensable

IMPORTANCE RATING

i) Physical education teacher wears appropriate gym clothing 0 1 2 3 4

SUGGESTIONS:

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III HEALTH INSTRUCTION 0 1 2 3 4

a) The physical education teacher teaches health practices during the physical education class where applicable. 0 1 2 3 4

b) Separate time is allotted to health outside of physical education classes. 0 1 2 3 4

SUGGESTIONS:

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IV INSTRUCTIONAL PROGRAM 0 1 2 3 4

a) Maximum pupil-teacher ratio of 12:1 in active games, gymnastics, rhythmic or fitness development. 0 1 2 3 4

b) Maximum pupil-teacher ratio of 5:1 in swimming. 0 1 2 3 4

c) Outdoor facilities used when weather permits. 0 1 2 3 4





## FIRST CHECKLIST (continued)

- 0 - undesirable  
 1 - unnecessary  
 2 - desirable  
 3 - essential  
 4 - indispensable

## IMPORTANCE RATING

- |  |           |
|--|-----------|
| d) Curriculum used is based on findings of researchers in the field.                                     | 0 1 2 3 4 |
| e) Opportunities exist for student planning and leadership.  | 0 1 2 3 4 |
| f) Audio-visual aids are used in teaching skills and concepts.   | 0 1 2 3 4 |
| g) Classes are coeducational up to the age of twelve.  | 0 1 2 3 4 |
| h) Classes of boys and girls are separated after the age of twelve for all activities.                   | 0 1 2 3 4 |
| i) Some coeducational activities are included in the physical education program after the age of twelve. | 0 1 2 3 4 |
| j) Vigorous activity is included in every class.   | 0 1 2 3 4 |
| k) Problem solving situations are structured to allow children to experiment and find success.           | 0 1 2 3 4 |
| l) The curriculum builds on skills learned in prior years.   | 0 1 2 3 4 |
| m) Material rewards are used for motivation in learning.   | 0 1 2 3 4 |
| n) Skills with recreational carry-over are included.   | 0 1 2 3 4 |
| o) Some group activity is included in every class.   | 0 1 2 3 4 |
| p) Gymnastics and tumbling are included.   | 0 1 2 3 4 |
| q) Fitness and posture exercises are included in every class.  | 0 1 2 3 4 |



FIRST CHECKLIST (continued)

- 0 - undesirable
- 1 - unnecessary
- 2 - desirable
- 3 - essential
- 4 - indispensable

IMPORTANCE RATING

- r) Dance and rhythmic activities are included. 0 1 2 3 4
- s) Track and field skills are included. 0 1 2 3 4
- t) Skating is included. 0 1 2 3 4
- u) Outdoor education (camping and hiking) is included. 0 1 2 3 4
- v) Swimming is included. 0 1 2 3 4
- w) Wrestling and weight lifting are included. 0 1 2 3 4
- x) Children aged five to ten years have programs including the following:
  - 1. basic motor skills (run, jump, throw). 0 1 2 3 4
  - 2. self-competition 0 1 2 3 4
  - 3. simple games and relays 0 1 2 3 4
  - 4. lead-ups to major team sports 0 1 2 3 4
- y) Children aged eleven and over have programs including the following:
  - 1. group competition 0 1 2 3 4
  - 2. individual and dual activities. 0 1 2 3 4
  - 3. team sports. 0 1 2 3 4
  - 4. officiating and scoring of games. 0 1 2 3 4

SUGGESTIONS:

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FIRST CHECKLIST (continued)

- 0 - undesirable
- 1 - unnecessary
- 2 - desirable
- 3 - essential
- 4 - indispensable

IMPORTANCE RATING

V	INDOOR FACILITIES	0	1	2	3	4
	(unless otherwise specified, they are to be part of the school complex)					
a)	Gymnasium					
	1. with one teaching station.	0	1	2	3	4
	2. with two teaching stations.	0	1	2	3	4
b)	Access to a swimming pool					
	1. in the school complex.	0	1	2	3	4
	2. in the community.	0	1	2	3	4
c)	Showers.	0	1	2	3	4
d)	Locker-rooms.	0	1	2	3	4
e)	Weight lifting room.	0	1	2	3	4
f)	Physical education teacher's office.	0	1	2	3	4
g)	Access to bowling alleys					
	1. in the school complex.	0	1	2	3	4
	2. in the community.	0	1	2	3	4
h)	Access to a curling rink					
	1. in the school complex.	0	1	2	3	4
	2. in the community.	0	1	2	3	4

SUGGESTIONS:

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# FIRST CHECKLIST (continued)

- 0 - undesirable
- 1 - unnecessary
- 2 - desirable
- 3 - essential
- 4 - indispensable

## IMPORTANCE RATING

### VI OUTDOOR FACILITIES

0 1 2 3 4

(unless otherwise specified, they are to be included in the school complex)

- |  |           |
|--|-----------|
| a) Climbing apparatus.                                       | 0 1 2 3 4 |
| b) Running track.  | 0 1 2 3 4 |
| c) Playing field large enough for a soccer or football game. | 0 1 2 3 4 |
| d) Access to a skating rink                                  |           |
| 1. in the school complex.                                    | 0 1 2 3 4 |
| 2. in the community.   | 0 1 2 3 4 |
| e) Wading pool.  | 0 1 2 3 4 |
| f) Access to tennis courts                                   |           |
| 1. in the school complex                                     | 0 1 2 3 4 |
| 2. in the community  | 0 1 2 3 4 |
| g) Playground equipment including:                           |           |
| 1. swings.   | 0 1 2 3 4 |
| 2. slides.   | 0 1 2 3 4 |
| 3. sand box.   | 0 1 2 3 4 |
| 4. merry-go-round.   | 0 1 2 3 4 |
| 5. teeter-totter.  | 0 1 2 3 4 |
| 6. obstacle courses and tunnels                              | 0 1 2 3 4 |
| 7. colorful equipment  | 0 1 2 3 4 |

### SUGGESTIONS:

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FIRST CHECKLIST (continued)

- 0 - undesirable
- 1 - unnecessary
- 2 - desirable
- 3 - essential
- 4 - indispensable

IMPORTANCE RATING

VII	EQUIPMENT AND MATERIALS	0	1	2	3	4
a)	One ball per child, in several sizes.	0	1	2	3	4
b)	One bean bag per child.	0	1	2	3	4
c)	Plastic hoops.	0	1	2	3	4
d)	Skipping ropes	0	1	2	3	4
e)	Pingminton bats.	0	1	2	3	4
f)	One tumbling mat per two children.	0	1	2	3	4
g)	Climbing ropes and ladders.	0	1	2	3	4
h)	Floating toys for use in the pool.	0	1	2	3	4
i)	Trampoline.	0	1	2	3	4
j)	Weights for weight lifting.	0	1	2	3	4
k)	Large gymnastic apparatus including:					
	1. box horse.	0	1	2	3	4
	2. balance beam.	0	1	2	3	4
	3. uneven and parallel bars.	0	1	2	3	4
	4. rings.	0	1	2	3	4
l)	Court markings for basketball and volley-ball, and respective hoops and nets.	0	1	2	3	4

SUGGESTIONS:

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FIRST CHECKLIST (continued)

- 0 - undesirable
- 1 - unnecessary
- 2 - desirable
- 3 - essential
- 4 - indispensable

IMPORTANCE RATING

VIII	INTRAMURAL PROGRAM	0	1	2	3	4
	a) Regular intramural programs are held during lunch hour.	0	1	2	3	4
	b) Regular intramural programs are held after school hours.	0	1	2	3	4
	c) Student leadership opportunities are provided.	0	1	2	3	4
	d) Material awards are given to winners of competitive activities.	0	1	2	3	4
	e) Coeducational activities are included.	0	1	2	3	4
	f) Recreational activities such as recreational swimming are included.	0	1	2	3	4
	g) Competition is restricted to individual activities.	0	1	2	3	4
	h) Competition is allowed in team sports.	0	1	2	3	4
	i) Some supervised "free play" is allowed each day.	0	1	2	3	4

SUGGESTIONS:

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IX	ATHLETIC COMPETITION (EXTRA-SCHOOL COMPETITION)	0	1	2	3	4
	a) Competition is with teams or individuals from other schools for retarded children.	0	1	2	3	4



FIRST CHECKLIST (continued)

- 0 - undesirable
- 1 - unnecessary
- 2 - desirable
- 3 - essential
- 4 - indispensable

IMPORTANCE RATING

b) Competition is with teams or individuals from normal schools.	0	1	2	3	4
c) Competition is with adults from the community.	0	1	2	3	4
d) Competition is with school staff.	0	1	2	3	4
e) Regular leagues are participated in.	0	1	2	3	4
f) Competition is occasional ie. exhibition games.	0	1	2	3	4
g) Competition is found in the following sports:					
1. weight lifting (boys).	0	1	2	3	4
2. wrestling (boys).	0	1	2	3	4
3. floor hockey.	0	1	2	3	4
4. curling.	0	1	2	3	4
5. bowling.	0	1	2	3	4
6. track and field.	0	1	2	3	4
7. swimming.	0	1	2	3	4
8. gymnastics.	0	1	2	3	4
9. basketball.	0	1	2	3	4
10. volleyball.	0	1	2	3	4
11. football (boys).	0	1	2	3	4
12. baseball.	0	1	2	3	4

SUGGESTIONS:

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## RAW SCORES FOR FIRST CHECKLIST

Area	Item	Number of times each rating was chosen					Total jurors	Average rating
		0	1	2	3	4		
I	a	0	0	1	2	11	14	3.6
	b	0	1	3	3	7	14	3.0
	c	4	3	4	1	1	13	1.4
	d	5	0	4	2	2	13	1.7
	e	12	1	0	0	0	13	.1
	f	0	0	9	2	3	14	2.6
	g	0	0	6	4	5	14	2.9
	h	0	0	4	6	4	14	3.0
	i	0	0	3	6	5	14	3.1
	j	1	3	5	4	1	14	2.1
	k	0	5	6	2	1	14	1.9
II	a-1	0	0	2	6	3	11	3.1
	-2	0	0	5	5	2	12	2.8
	-3	0	1	4	5	2	12	2.7
	b	0	2	6	2	4	14	2.6
	c	0	1	8	3	2	14	2.4
	d	0	1	5	6	2	14	2.6
	e	0	3	7	2	1	13	2.1
	f	0	3	7	1	2	13	2.2
	g	2	1	5	4	2	14	2.1
	h	0	3	7	4	0	14	2.1
	i	0	0	4	7	3	14	2.9
III	a	0	2	4	4	3	13	2.6
	b	2	1	6	3	2	14	2.1
IV	a	1	0	4	4	5	14	2.9
	b	1	0	4	2	6	13	2.9
	c	0	0	2	6	6	14	3.3
	d	0	1	6	6	4	14	2.9
	e	0	1	5	6	2	14	2.6
	f	0	0	8	2	4	14	2.7
	g	0	3	8	2	1	14	2.1
	h	4	7	2	1	0	14	1.0
	i	0	0	6	4	4	14	2.9
	j	0	1	2	6	4	13	3.0
	k	0	0	3	7	4	14	3.1
	l	0	1	3	5	5	14	3.0
	m	5	5	2	2	0	14	1.1
	n	0	0	0	7	6	13	3.5
	o	0	2	5	4	3	14	2.6





## RAW SCORES FOR FIRST CHECKLIST (continued)

Area	Item	Number of times each rating was chosen					Total Jurors	Average rating
		0	1	2	3	4		
IV	p	0	0	5	2	6	13	3.1
	q	2	2	4	2	4	14	2.4
	r	0	0	5	2	7	14	3.1
	s	0	0	5	4	4	13	2.7
	t	0	0	8	2	3	13	2.6
	u	0	1	8	1	3	13	2.5
	v	0	0	5	3	6	14	3.1
	w	0	3	7	1	2	13	2.2
	x-1	0	0	1	3	10	14	3.6
	-2	1	0	2	3	7	13	3.2
	-3	0	0	2	7	4	13	3.2
	-4	2	1	6	2	3	14	2.2
	y-1	0	0	6	3	4	13	2.9
	-2	0	0	4	3	6	13	3.2
	-3	0	1	4	5	3	13	2.8
	-4	0	4	5	3	1	13	2.1
V	a-1	3	0	3	2	2	10	2.0
	-2	0	1	5	2	2	10	2.5
	b-1	0	0	5	5	4	14	2.9
	-2	0	1	4	4	5	14	2.8
	c	0	0	3	5	6	14	3.2
	d	0	1	4	4	5	14	2.9
	e	0	6	5	1	2	14	1.9
	f	0	2	3	2	7	14	3.0
	g-1	0	7	5	1	1	14	1.7
	-2	0	1	5	3	5	14	2.8
	h-1	0	9	3	1	1	14	1.6
	-2	0	3	3	4	4	14	2.6
VI	a	0	0	4	3	7	14	3.2
	b	0	2	6	1	5	14	2.6
	c	0	0	4	4	6	14	3.1
	d-1	0	4	5	1	3	14	2.2
	-2	0	1	5	4	3	13	2.7
	e	0	4	6	1	3	14	2.2
	f-1	0	4	7	0	3	14	2.1
	-2	0	2	6	2	4	14	2.6
	g-1	0	3	4	4	3	14	2.5
	-2	0	3	2	5	4	14	2.7
	-3	0	2	5	3	4	14	2.6
	-4	0	3	6	2	3	14	2.4



## RAW SCORES FOR FIRST CHECKLIST (continued)

Area	Item	Number of times each rating was chosen					Total Jurors	Average Rating
		0	1	2	3	4		
VI	g-5	0	3	5	3	3	14	2.4
	-6	0	0	4	4	6	14	3.1
	-7	0	0	4	5	5	14	3.1
VII	a	0	0	4	4	6	14	3.1
	b	0	0	3	5	6	14	3.2
	c	0	0	3	5	6	14	3.2
	d	0	0	2	6	6	14	3.3
	e	0	1	5	2	4	12	2.8
	f	0	3	4	4	3	14	2.5
	g	0	0	4	4	6	14	3.1
	h	0	2	7	3	2	14	2.4
	i	0	1	4	3	5	13	2.9
	j	0	3	4	3	3	13	2.5
	k-1	0	1	4	2	6	13	3.0
	-2	0	2	4	2	5	13	2.8
	-3	0	3	4	2	4	13	2.5
	-4	0	3	3	3	4	13	2.6
	l	0	5	6	2	1	14	1.9
VIII	a	2	2	7	2	1	14	1.9
	b	2	2	6	2	2	14	2.0
	c	0	0	6	3	5	14	2.9
	d	2	4	6	1	0	13	1.5
	e	0	1	7	1	5	14	2.7
	f	0	0	7	2	5	14	2.9
	g	8	5	1	0	0	14	0.5
	h	0	0	8	1	3	12	2.5
	i	0	2	4	2	5	13	2.8
IX	a	0	1	9	1	2	13	2.3
	b	2	5	5	1	0	13	1.4
	c	4	6	2	0	1	13	1.1
	d	3	4	6	1	0	14	1.4
	e	3	4	7	0	0	14	1.3
	f	1	1	10	1	0	14	1.7
	g-1	2	7	3	0	2	14	1.5
	-2	0	3	9	0	2	14	1.9
	-3	1	0	8	3	2	14	2.4
	-4	0	1	10	2	1	14	2.2
	-5	0	0	11	2	1	14	2.3
	-6	0	0	10	2	2	14	2.4
	-7	0	2	9	1	2	14	2.1
	-8	0	3	8	1	2	14	2.1



## RAW SCORES FOR FIRST CHECKLIST (Continued)

Area	Item	Number of times each rating was chosen					Total jurors	Average rating
		0	1	2	3	4		
IX	g-9	1	1	10	0	2	14	2.1
	-10	1	1	9	1	2	14	2.1
	-11	2	1	9	1	1	14	1.9
	-12	1	2	9	1	1	14	1.8



APPENDIX C  
SECOND CHECKLIST





LETTER AND INSTRUCTIONS  
FOR SECOND CHECKLIST

#301, 8510 - 111 St.  
Edmonton 61, Alberta  
May 14, 1969

Dear

Thank you for your assistance in rating the first checklist.

Enclosed please find the second checklist to be rated. This list is made up of those items which received an overall rating of 2 or more from the jurors, plus suggestions made by the jurors. Please rate them in the same way and return the list at your earliest convenience.

Several points should be brought to your attention before rating this list.

1. Due to confusion over the difference between "essential" and "indispensable", the rating scale has been changed to the following:

- 0 - undesirable
- 1 - unnecessary
- 2 - acceptable
- 3 - very desirable
- 4 - indispensable

I hope this will make the rating easier.

2. It has been noted by several of our jurors that while some program is essential, the individual items needed depend on each child. While this is acknowledged as a limitation of this evaluating technique, I still feel there is value in obtaining a guideline for physical education programs for retardates. The activities thought important by the jurors should be adapted to the children involved.

3. In rating the section on facilities, it is realized that a good program does not always follow if adequate facilities are available, but there seems to be a greater possibility of one. Your rating determines which facilities are most useful in promoting a good program.

Thank you again for your interest and cooperation. I look forward to your rating of the second checklist.

Sincerely yours,

Brenda Shedden

NOTE: Comments and additions may be made on page 7 of the form.



## SECOND CHECKLIST

- 0 - undesirable
- 1 - unnecessary
- 2 - acceptable
- 3 - very desirable
- 4 - indispensable

## I POLICIES AND PROCEDURES

## IMPORTANCE RATING

- |  |   |   |   |   |   |
|--|---|---|---|---|---|
| a) All children attending school take part in a regular physical education program if physically able. | 0 | 1 | 2 | 3 | 4 |
| b) All children have a medical examination before the program begins.                                  | 0 | 1 | 2 | 3 | 4 |
| c) Children with physical handicaps are placed in regular physical education classes where possible.   | 0 | 1 | 2 | 3 | 4 |
| d) Non-ambulatory students are placed in special physical education classes.                           | 0 | 1 | 2 | 3 | 4 |
| e) Non-ambulatory students are exempt from physical education classes.                                 | 0 | 1 | 2 | 3 | 4 |
| f) Each child has at least:  |   |   |   |   |   |
| 1. forty-five minutes of physical education per day.   | 0 | 1 | 2 | 3 | 4 |
| 2. Thirty percent of school day for physical education.  | 0 | 1 | 2 | 3 | 4 |
| g) Physical education classes continue from age five to at least age twenty.                           | 0 | 1 | 2 | 3 | 4 |
| h) Physical education classes continue from age of entry into school to age of departure from school.  | 0 | 1 | 2 | 3 | 4 |
| i) Children change into appropriate gym clothing.  | 0 | 1 | 2 | 3 | 4 |
| j) Records be kept from year to year on each child's progress and medical status.                      | 0 | 1 | 2 | 3 | 4 |
| k) Fitness testing of students be done at least twice a year.  | 0 | 1 | 2 | 3 | 4 |



## SECOND CHECKLIST (continued)

- 0 - undesirable
- 1 - unnecessary
- 2 - acceptable
- 3 - very desirable
- 4 - indispensable

## IMPORTANCE RATING

## II INSTRUCTIONAL STAFF

a) Class instructors have a university degree

- |   |   |   |   |   |   |
|---|---|---|---|---|---|
| 1. in regular physical education.                       | 0 | 1 | 2 | 3 | 4 |
| 2. in special education.                                | 0 | 1 | 2 | 3 | 4 |
| 3. with special emphasis on adapted physical education. | 0 | 1 | 2 | 3 | 4 |

b) Advisory staff have university training while actual instructors not necessarily university trained.

0	1	2	3	4
---	---	---	---	---

c) Student teaching experience with mentally retarded children prior to teaching on a permanent basis.

0	1	2	3	4
---	---	---	---	---

d) Previous experience in teaching physical education to normal children.

0	1	2	3	4
---	---	---	---	---

e) In-service training while teaching retardates.

0	1	2	3	4
---	---	---	---	---

f) Male physical education teacher for boys:

- |                       |   |   |   |   |   |
|-----------------------|---|---|---|---|---|
| 1. under 12 years.    | 0 | 1 | 2 | 3 | 4 |
| 2. 12 years and over. | 0 | 1 | 2 | 3 | 4 |

g) Female physical education teacher for girls:

- |                      |   |   |   |   |   |
|----------------------|---|---|---|---|---|
| 1. under 12 years.   | 0 | 1 | 2 | 3 | 4 |
| 2. 12 years and over | 0 | 1 | 2 | 3 | 4 |

h) Use of volunteers with previous experience in physical education or special education.

0	1	2	3	4
---	---	---	---	---

i) Use of paid staff with at least grade ten schooling, hired on personal merit to assist instructional staff.

0	1	2	3	4
---	---	---	---	---



## SECOND CHECKLIST (continued)

- 0 - undesirable
- 1 - unnecessary
- 2 - acceptable
- 3 - very desirable
- 4 - indispensable

## IMPORTANCE RATING

j) Physical education teacher wears appropriate gym clothing.

0 1 2 3 4

## III HEALTH EDUCATION

a) Health education be included in this evaluation form.

0 1 2 3 4

b) Separate time is allotted to health education, outside of physical education classes.

0 1 2 3 4

## IV INSTRUCTIONAL PROGRAM

a) Maximum pupil-teacher ratio for children under 12 years in games, gymnastics or dance:

1. ratio of 12:1

0 1 2 3 4

2. ratio of 7:1.

0 1 2 3 4

b) Maximum pupil-teacher ratio for children 12 years and over in games, gymnastics or dance:

1. ratio of 12:1.

0 1 2 3 4

2. ratio of 7:1.

0 1 2 3 4

c) Maximum pupil-teacher ratio of 2:1 with non-swimmers.

0 1 2 3 4

d) Maximum pupil-teacher ratio of 5:1 with experienced swimmers.

0 1 2 3 4

e) Outdoor facilities used when weather permits.

0 1 2 3 4

f) Curriculum used is based on findings of researchers in the field.

0 1 2 3 4

g) Opportunities exist for student planning of activities and leadership.

0 1 2 3 4





## SECOND CHECKLIST (continued)

- 0 - undesirable
- 1 - unnecessary
- 2 - acceptable
- 3 - very desirable
- 4 - indispensable

## IMPORTANCE RATING

h) Audio-visual aids are used in teaching.	0	1	2	3	4
i) Classes are coeducational up to the age of 12 years.	0	1	2	3	4
j) Some coeducational recreational activities are included in the program after age 12.	0	1	2	3	4
k) Problem-solving situations are structured to allow children to experiment and find success.	0	1	2	3	4
l) The curriculum builds on skills learned in prior years.	0	1	2	3	4
m) Skills with recreational carry-over are included.	0	1	2	3	4
n) Gymnastics and tumbling are included.	0	1	2	3	4
o) Fitness activities and posture exercise are included in every class.	0	1	2	3	4
p) Dance and rhythmic activities are included.	0	1	2	3	4
q) Track and field skills are included.	0	1	2	3	4
r) Skating is included.	0	1	2	3	4
s) Hiking is included.	0	1	2	3	4
t) Camping is included	0	1	2	3	4
u) Swimming is included	0	1	2	3	4
v) Wrestling is included	0	1	2	3	4



## SECOND CHECKLIST (continued)

- 0 - undesirable  
 1 - unnecessary  
 2 - acceptable  
 3 - very desirable  
 4 - indispensable

## IMPORTANCE RATING

w) Weight lifting as exercise therapy to improve fitness is included.

0 1 2 3 4

x) Children aged five to eleven years have programs including the following:

1. basic motor skills of running, jumping, walking and throwing.

0 1 2 3 4

2. self-competition.

0 1 2 3 4

3. simple team games.

0 1 2 3 4

4. creative games.

0 1 2 3 4

5. relays.

0 1 2 3 4

y) Children aged twelve and over have programs including:

1. group competition.

0 1 2 3 4

2. individual and dual activities.

0 1 2 3 4

3. team sports.

0 1 2 3 4

4. officiating and scoring of games.

0 1 2 3 4

## V. INDOOR FACILITIES

a) Gymnasium--large enough to contain a regulation size basketball court.

0 1 2 3 4

b) Partitions in gymnasium to allow at least two small teaching stations for primary classes.

0 1 2 3 4

c) Access to swimming pool

1. in school complex.

0 1 2 3 4

2. in the community.

0 1 2 3 4

d) Showers.

0 1 2 3 4

e) Locker rooms.

0 1 2 3 4



## SECOND CHECKLIST (continued)

- 0 - undesirable  
 1 - unnecessary  
 2 - acceptable  
 3 - very desirable  
 4 - indispensable

## IMPORTANCE RATING

f) Physical education teachers' office. 0 1 2 3 4

g) Access to bowling alleys in the community. 0 1 2 3 4

h) Access to a curling rink in the community. 0 1 2 3 4

## VI OUTDOOR FACILITIES

a) Climbing apparatus 0 1 2 3 4

b) Running track 0 1 2 3 4

c) Playing field large enough for a soccer or football game. 0 1 2 3 4

d) Access to a skating rink  
 1. in the school complex. 0 1 2 3 4

2. in the community. 0 1 2 3 4

e) Wading pool. 0 1 2 3 4

f) Access to tennis court  
 1. in the school complex. 0 1 2 3 4

2. in the community. 0 1 2 3 4

g) Playground equipment:  
 1. swings. 0 1 2 3 4

2. slide. 0 1 2 3 4

3. sand-box. 0 1 2 3 4

4. merry-go-round. 0 1 2 3 4

5. teeter-totter. 0 1 2 3 4

6. obstacle courses and tunnels. 0 1 2 3 4

7. colorful equipment. 0 1 2 3 4



## SECOND CHECKLIST (continued)

- 0 - undesirable  
 1 - unnecessary  
 2 - acceptable  
 3 - very desirable  
 4 - indispensable

## IMPORTANCE RATING

## VII EQUIPMENT AND MATERIALS

a) One ball per child in at least two sizes.	0	1	2	3	4
b) One bean bag per child.	0	1	2	3	4
c) Plastic hoops.	0	1	2	3	4
d) Skipping ropes	0	1	2	3	4
e) Pingminton bats.	0	1	2	3	4
f) Climbing ropes and ladders.	0	1	2	3	4
g) Floating toys for use in the pool.	0	1	2	3	4
h) Weights for weight training.	0	1	2	3	4
i) Gymnastic apparatus including:					
1. Trampoline	0	1	2	3	4
2. Minimum of 20 feet of 4 foot wide tumbling mat per 10 students.	0	1	2	3	4
3. Box horse.	0	1	2	3	4
4. Balance beam.	0	1	2	3	4
5. Balance benches.	0	1	2	3	4
6. Uneven and parallel bars.	0	1	2	3	4
7. Rings.	0	1	2	3	4
8. Springboard.	0	1	2	3	4
j) Target-type equipment.	0	1	2	3	4
k) Colored boxes of various sizes.	0	1	2	3	4
l) Large tires.	0	1	2	3	4

## VIII INTRAMURAL PROGRAM

a) Regular intramural programs are held after school hours.	0	1	2	3	4
---	---	---	---	---	---





## SECOND CHECKLIST (continued)

- 0 - undesirable
- 1 - unnecessary
- 2 - acceptable
- 3 - very desirable
- 4 - indispensable

## IMPORTANCE RATING

- b) Student leadership opportunities are provided as follows:
- 1. Staff supervisor but student officials and team captains. 0 1 2 3 4
  - 2. Staff supervisor and officials with student team captains. 0 1 2 3 4
- c) Trophies are awarded to league winners. 0 1 2 3 4
- d) Coeducational activities are included. 0 1 2 3 4
- e) Recreational activities such as recreational swimming are included. 0 1 2 3 4
- f) Competition is found in individual and simple group activities. 0 1 2 3 4
- g) Some supervised "free play" is allowed each day:
- 1. for children under 12 years. 0 1 2 3 4
  - 2. for children 12 years and over. 0 1 2 3 4

## IX ATHLETIC COMPETITION (EXTRA-SCHOOL COMPETITION)

- a) Competition is with teams or individuals from other schools for retarded children. 0 1 2 3 4
- b) Occasional competition is held
- 1. for children under 12 years. 0 1 2 3 4
  - 2. for children 12 years and over. 0 1 2 3 4
- c) Regular leagues are participated in
- 1. with children under 12 years. 0 1 2 3 4
  - 2. with children 12 years and over. 0 1 2 3 4
- d) Competition for children under 12 years:
- 1. wrestling (boys). 0 1 2 3 4



## SECOND CHECKLIST (continued)

- 0 - undesirable  
 1 - unnecessary  
 2 - acceptable  
 3 - very desirable  
 4 - indispensable

## IMPORTANCE RATING

2. floor hockey.	0	1	2	3	4
3. curling.	0	1	2	3	4
4. bowling.	0	1	2	3	4
5. track and field	0	1	2	3	4
6. swimming.	0	1	2	3	4
7. gymnastics.	0	1	2	3	4
8. volleyball	0	1	2	3	4
9. basketball	0	1	2	3	4

## e) Competition for children 12 years and over:

1. wrestling (boys).	0	1	2	3	4
2. floor hockey.	0	1	2	3	4
3. curling.	0	1	2	3	4
4. bowling.	0	1	2	3	4
5. track and field.	0	1	2	3	4
6. swimming.	0	1	2	3	4
7. gymnastics.	0	1	2	3	4
8. volleyball.	0	1	2	3	4
9. basketball.	0	1	2	3	4



## COMMENTS

PART I

PART II

PART III

PART IV

PART V

PART VI

PART VII

PART VIII

PART IX



## RAW SCORES FOR SECOND CHECKLIST

Area	Item	Number of times each rating was chosen					Total jurors	Average rating
		0	1	2	3	4		
I	a	0	0	0	1	12	13	3.9
	b	0	0	2	4	7	13	3.4
	c	0	1	0	8	2	11	3.0
	d	2	1	0	7	3	13	2.6
	e	8	5	0	0	0	13	0.4
	f-1	0	0	3	4	6	13	3.2
	-2	0	7	1	4	1	13	1.9
	g	0	0	0	11	2	13	3.2
	h	0	0	0	7	6	13	3.5
	i	0	1	0	8	4	13	3.1
	j	0	0	1	5	7	13	3.5
	k	1	1	3	6	2	13	2.8
II	a-1	0	0	1	7	5	13	3.3
	-2	0	1	2	9	1	13	2.8
	-3	0	0	1	7	5	13	3.3
	b	4	0	5	3	1	13	1.8
	c	0	0	2	7	4	13	3.2
	d	0	0	2	9	2	13	3.0
	e	0	0	1	9	3	13	3.2
	f-1	0	6	2	5	0	13	1.9
	-2	0	0	1	9	3	13	3.2
	g-1	0	6	3	4	0	13	1.8
	-2	0	1	1	8	3	13	3.0
	h	0	1	3	8	1	13	2.7
	i	2	0	5	6	0	13	2.2
	j	0	0	1	7	5	13	3.3
III	a	2	5	0	5	1	13	1.8
	b	1	0	0	8	4	13	3.1





## RAW SCORES FOR SECOND CHECKLIST (continued)

Area	Item	Number of times each rating was chosen					Total jurors	Average rating
		0	1	2	3	4		
IV	a-1	2	1	5	4	0	12	1.9
	a-2	0	2	2	7	0	11	2.5
	b-1	1	1	4	5	2	13	2.5
	-2	0	3	2	7	0	12	2.3
	c	0	2	1	8	2	13	2.8
	d	0	0	4	8	1	13	2.8
	e	0	0	1	6	6	13	3.4
	f	0	1	0	8	4	13	3.2
	g	0	0	2	8	3	13	3.1
	h	0	0	2	8	3	13	3.1
	i	0	2	4	6	1	13	2.5
	j	0	0	0	7	6	13	3.5
	k	0	0	1	6	6	13	3.4
	l	0	0	1	5	7	13	3.5
	m	0	0	0	4	9	13	3.7
	n	0	0	1	7	5	13	3.3
	o	2	1	0	5	5	13	2.8
	p	0	0	0	7	6	13	3.5
	q	0	0	0	9	4	13	3.3
	r	0	0	2	8	3	13	3.1
	s	0	0	0	7	6	13	3.5
	t	0	1	1	8	3	13	3.0
	u	0	0	0	4	9	13	3.7
	v	0	1	3	7	2	13	2.8
	w	0	1	3	6	3	13	2.8
	x-1	0	0	0	3	10	13	3.8
	-2	0	0	1	5	7	13	3.5
	-3	0	0	4	6	3	13	2.9
	-4	0	0	0	7	6	13	3.5
	-5	1	2	3	4	4	13	2.8



## RAW SCORES FOR SECOND CHECKLIST (continued)

Area	Item	Number of times each rating was chosen					Total jurors	Average rating
		0	1	2	3	4		
IV	y-1	0	0	3	6	4	13	3.1
	-2	0	0	2	3	8	13	3.5
	-3	1	2	3	5	2	13	2.4
	-4	0	3	3	3	3	12	2.5
V	a	0	2	1	4	6	13	3.1
	b	0	1	2	7	3	13	2.9
	c-1	0	1	0	7	5	13	3.2
	-2	0	1	0	6	5	12	3.3
	d	0	0	0	5	8	13	3.6
	e	0	0	0	5	8	13	3.6
	f	0	2	0	5	6	13	3.2
	g	1	0	0	8	4	13	3.1
	h	1	0	2	7	3	13	2.8
VI	a	0	0	0	5	8	13	3.6
	b	0	0	2	8	3	13	3.1
	c	0	0	1	6	6	13	3.4
	d-1	0	1	0	8	4	13	3.2
	-2	0	1	0	7	4	12	2.9
	e	0	2	1	7	2	12	2.8
	f-1	0	1	5	3	3	12	2.7
	-2	1	1	3	3	5	13	2.8
	g-1	0	2	2	6	3	13	2.8
	-2	1	2	2	5	4	13	2.8
	-3	0	1	3	5	4	13	2.9
	-4	0	2	2	7	2	13	2.7
	-5	0	2	3	6	2	13	2.6
	-6	0	0	1	5	7	13	3.5
	-7	0	0	0	4	9	13	3.7



## RAW SCORES FOR SECOND CHECKLIST (continued)

Area	Item	Number of times each rating was chosen					Total jurors	Average rating
		0	1	2	3	4		
VII	a	0	0	0	4	9	13	3.7
	b	0	0	0	4	9	13	3.7
	c	0	0	1	3	9	13	3.6
	d	0	0	0	4	9	13	3.7
	e	0	0	1	4	6	11	3.5
	f	0	0	0	7	6	13	3.5
	g	0	1	2	5	4	12	3.0
	h	0	1	2	4	6	13	3.2
	i-1	0	0	2	5	6	13	3.3
	-2	0	1	0	6	6	13	3.3
	-3	0	0	2	4	7	13	3.4
	-4	0	0	1	6	6	13	3.4
	-5	0	1	1	3	8	13	3.4
	-6	0	2	2	3	6	13	3.0
	-7	0	0	2	3	7	12	3.4
	-8	0	1	2	3	7	13	3.2
	j	0	0	0	7	5	12	3.4
	k	0	0	0	5	8	13	3.6
	l	0	0	2	4	7	13	3.4
VIII	a	1	2	3	6	1	13	2.3
	b-1	2	0	5	3	3	13	2.9
	-2	0	0	5	6	2	13	2.8
	c	0	2	5	3	2	12	2.4
	d	0	0	0	8	4	13	3.3
	e	0	0	0	5	7	12	3.6
	f	0	0	1	8	4	13	3.2
	g-1	0	0	1	5	7	13	3.5
	-2	0	1	1	6	5	13	3.2



## RAW SCORES FOR SECOND CHECKLIST (Continued)

Area	Item	Number of times each rating was chosen					Total jurors	Average rating
		0	1	2	3	4		
IX	a	0	0	4	8	1	13	2.8
	b-1	2	1	6	4	0	13	1.9
	-2	0	0	3	8	2	13	2.9
	c-1	4	7	1	1	0	13	.9
	-2	1	3	6	1	2	13	2.0
	d-1	4	4	3	0	2	13	1.5
	-2	2	3	4	1	3	13	2.0
	-3	3	6	3	1	0	13	1.2
	-4	3	4	2	4	0	13	1.5
	-5	2	2	3	3	3	13	2.2
	-6	3	2	3	0	6	13	2.5
	-7	2	3	2	3	3	13	2.2
	-8	4	3	4	1	1	13	1.5
	-9	5	3	3	2	0	13	1.2
	e-1	1	0	6	3	3	13	2.5
	-2	0	0	4	5	4	13	3.0
	-3	1	1	4	5	2	13	2.5
	-4	0	0	5	5	3	13	2.8
	-5	0	0	4	5	4	13	3.0
	-6	0	0	4	3	6	13	3.2
	-7	0	0	6	3	4	13	2.8
	-8	0	0	5	4	4	13	2.9
	-9	0	1	4	5	3	13	2.8





APPENDIX D  
THIRD CHECKLIST



LETTER AND INSTRUCTIONS  
FOR THIRD CHECKLIST

Box 2522, Postal Stn. "A"  
Edmonton, Alberta  
August 15, 1969

Dear

This is the final form to be mailed to you. I am sorry for the delay in mailing this form, but hope you will find the time to complete it.

All the items in the form have been accepted by a majority of the jurors as being desirable in producing a good physical education program for trainable mentally retarded children in special schools for retardates. This final form requires that you rate each major area and each detailed item as to its relative importance in the physical education program. For example, you may feel that well qualified staff are more of an asset than beautiful facilities; or that service program content is of greater importance to the child's development than the intramural program.

Please read the instructions on the following page before proceeding.

Thank you for the time and work you have contributed to this project. It would have been impossible without your cooperation. I hope that the results of using this score card in evaluating Alberta schools for retardates will prove of some value. The final results of the project will be forwarded to you when completed.

Sincerely,



## INSTRUCTIONS

## PART A - MAJOR AREAS

1. Read all major area headings.
2. Rate each major area out of 100%. The total values given to the areas must equal 100%. If you are in doubt as to the content of any area, please read the items included in that area in the section entitled "Major areas in detail".

## 3. EXAMPLE:

Area I - Policies	<u>10%</u>
II - Instructional Staff	<u>20%</u>
etc.	
TOTAL	<u>100%</u>

In this example, policies and procedures were considered to be of less importance than staff, in evaluating the programs' efficiency and usefulness.

## PART B - MAJOR AREAS IN DETAIL

1. Read all items carefully under AREA I.
2. Rate each item out of 100% for that area.
3. Rate sub-items under each item, rating them no more than the value indicated in the main item. Please note that there are two types of sub-items. (See examples following).
4. Continue this procedure for areas II to IX.
5. EXAMPLE: (OR type of sub-item.)

Area II A. Class instructors have a university degree.	<u>5%</u>
1. in regular physical education	<u>4%</u>
<u>OR</u> 2. in special education	<u>4%</u>
<u>OR</u> 3. with special emphasis on adapted physical education	<u>5%</u>
<u>OR</u> 4. in regular education	<u>2%</u>

In this OR example, item A is worth 5% of Area II, and sub-item 3 is worth more than 1, 2 or 4. The maximum value a sub-item could have is the value given to the main item in an OR type of question.



## INSTRUCTIONS (continued)

6. EXAMPLE: (LIST type of sub-item.)

Area V	G. Playground equipment	<u>15%</u>
	1. swings	<u>2%</u>
	2. slide	<u>1%</u>
	3. sand-box	<u>3%</u>
	4. merry-go-round	<u>1%</u>
	5. teeter-totter	<u>1%</u>
	6. tunnels	<u>3%</u>
	7. colorful equipment	<u>4%</u>

In the LIST type, all sub-items must add up to the value given to the item. (in this case 15%).

7. NEGATIVE ITEMS: After rating an area out of 100%, rate the negative items following it as to the amount which should be deducted if a school had that item. The negative items included are items strongly disagreed with by the jurors in the past two questionnaires.

NOTE: Do not include these items in the 100% for that area.

8. EXAMPLE: (NEGATIVE items)

Area I	J. Non-ambulatory students are exaempt from physical educa- tion classes.	5%
--------	---	----

In this case, 5% would be deducted if a school offered no physical education of any kind for non-ambulatory students.

NOTE: Please rate all areas and items and sub-items. Since they have all been accepted by the majority of the jurors, they should all be rated.





THIRD CHECKLIST

MAJOR AREAS

(Follow instructions Part A)

I	POLICIES . . . . .	_____
II	INSTRUCTIONAL STAFF . . . . .	_____
III	INSTRUCTIONAL PROGRAM PROCEDURES . . . . .	_____
IV	INSTRUCTIONAL PROGRAM ACTIVITIES . . . . .	_____
V	INDOOR FACILITIES . . . . .	_____
VI	OUTDOOR FACILITIES . . . . .	_____
VII	EQUIPMENT AND MATERIALS . . . . .	_____
VIII	INTRAMURAL PROGRAM . . . . .	_____
IX	ATHLETIC COMPETITION (EXTRA-SCHOOL) . . . . .	_____
TOTAL		<u>100%</u>



## DETAILED AREAS

(follow instructions Part B)

## I POLICIES

- a. All children attending school take part in a regular physical education program, . . . . . \_\_\_\_\_
- b. All children have a medical examination before the program begins, . . . . . \_\_\_\_\_
- c. Non-ambulatory students are placed in special physical education classes. . . . . \_\_\_\_\_
- d. Each child has at least forty-five minutes of physical education per day. . . . . \_\_\_\_\_
- e. Physical education classes continue from age five to at least age twenty. . . . . \_\_\_\_\_
- f. Children change into appropriate gym clothing.  
(Note: "appropriate" refers to bare feet or gym shoes, and girls wearing shorts or slacks --no dresses or street shoes.) \_\_\_\_\_
- g. Records are kept from year to year, recording each child's progress and medical status. . . \_\_\_\_\_
- h. Fitness testing of all students is completed at least twice a year. . . . . \_\_\_\_\_
- i. Separate time is allotted to health education outside physical education classes. . . . . \_\_\_\_\_

NEGATIVE:

- j. Non-ambulatory students are exempt from physical education classes. . . . . \_\_\_\_\_

## II INSTRUCTIONAL STAFF

- a. Class instructors have a university degree. . \_\_\_\_\_
  - 1. in regular physical education. . . \_\_\_\_\_
  - OR 2. in special education. . . . . \_\_\_\_\_
  - OR 3. with special emphasis on adapted physical education. . . . . \_\_\_\_\_
  - OR 4. in regular education. . . . . \_\_\_\_\_



DETAILED AREAS (continued)

(follow instructions Part B)

- b. Physical education instructors have student teaching experience with mentally retarded children prior to teaching on a permanent basis . . . . . \_\_\_\_\_
- c. Physical education instructors have previous experience in teaching normal children . . . \_\_\_\_\_
- d. Physical education instructors have in-service training while teaching retardates . . . . . \_\_\_\_\_
- e. Male physical education teacher be provided for boys twelve years and over . . . . . \_\_\_\_\_
- f. Female physical education teacher be provided for girls twelve years and over . . . . . \_\_\_\_\_
- g. Volunteers with previous experience in physical education or special education are used to assist the regular paid staff . . . . \_\_\_\_\_
- h. Paid staff with at least grade ten schooling, hired on personal merit, are hired to assist the regular staff . . . . . \_\_\_\_\_

III INSTRUCTIONAL PROGRAM PROCEDURES

- a. Maximum pupil-teacher ratio of 7:1 for children under age twelve in games, gymnastics or dance . . . . . \_\_\_\_\_
- b. Maximum pupil-teacher ratio for children twelves year and over in games, gymnastics or dance . . . . . \_\_\_\_\_
  - 1. ratio of 12:1 . . . . . \_\_\_\_\_
  - OR 2. ratio of 7:1 . . . . . \_\_\_\_\_
- c. Maximum pupil-teacher ratio for non-swimmers. \_\_\_\_\_
  - 1. ratio of 4:1 . . . . . \_\_\_\_\_
  - OR 2. ratio of 2:1 . . . . . \_\_\_\_\_
- d. Maximum pupil-teacher ratio of 5:1 with experienced swimmers . . . . . \_\_\_\_\_
- e. Curriculum used is based on writings of researchers in the field . . . . . \_\_\_\_\_
- f. Opportunities exist for student planning of activities and leadership; ie. squad leaders or voting on choice of activities . . . . . \_\_\_\_\_



DETAILED AREAS (continued)  
(follow instructions Part B)

- g. Audio-visual aids are used in teaching . . . . \_\_\_\_\_
- h. Classes are coeducational up to age twelve . . \_\_\_\_\_
- i. Problem-solving situations are stuctured to allow children to experiment and find success. \_\_\_\_\_
- j. The curriculum builds on skills learned in prior years . . . . . \_\_\_\_\_

NEGATIVE

- k. Classes of boys and girls are separated for all activities after age twelve . . . . . \_\_\_\_\_

IV INSTRUCTIONAL PROGRAM ACTIVITIES

- a. Skills with recreational carry-over are included . . . . . \_\_\_\_\_
  - 1. ice skating . . . . . \_\_\_\_\_
  - 2. hiking . . . . . \_\_\_\_\_
  - 3. camping . . . . . \_\_\_\_\_
  - 4. bicycling . . . . . \_\_\_\_\_
  - 5. fishing . . . . . \_\_\_\_\_
  - 6. croquet . . . . . \_\_\_\_\_
- b. Swimming is included . . . . . \_\_\_\_\_
- c. Gymnastics and tumbling are included . . . . . \_\_\_\_\_
- d. Posture exercises are included . . . . . \_\_\_\_\_
- e. Fitness exercises are included in every class. \_\_\_\_\_
- f. Dance and rhythmic activities are included . . \_\_\_\_\_
- g. Wrestling is included . . . . . \_\_\_\_\_
- h. Weight lifting as exercise therapy to improve fitness is included . . . . . \_\_\_\_\_
- i. Children aged five to eleven years have programs including . . . . . \_\_\_\_\_
  - 1. basic motor skills of running, jumping, walking and throwing . . . . \_\_\_\_\_





## DETAILED AREAS (continued)

(follow instructions Part B)

- i. 2. Self-competition . . . . . \_\_\_\_\_
- 3. Simple team games . . . . . 2
- 4. Creative games allowing use of  
imagination of students . . . . . \_\_\_\_\_
- 5. Relays . . . . . \_\_\_\_\_
- j. Children aged twelve and over have  
programs including . . . . . \_\_\_\_\_
- 1. group competition . . . . . \_\_\_\_\_
- 2. individual and dual activities . . . . . \_\_\_\_\_
- 3. team sports . . . . . \_\_\_\_\_
- 4. officiating and scoring of games . . . . . \_\_\_\_\_

NEGATIVE:

- k. No outdoor physical education . . . . . \_\_\_\_\_

## V INDOOR FACILITIES

- a. Gymnasium large enough to contain regulation  
size basketball court . . . . . \_\_\_\_\_
- b. Partitions in gymnasium to allow at least  
two teaching stations . . . . . \_\_\_\_\_
- c. Access to swimming pool . . . . . \_\_\_\_\_
- 1. in the school complex . . . . . \_\_\_\_\_
- OR 2. only in the community . . . . . \_\_\_\_\_
- d. Showers . . . . . \_\_\_\_\_
- e. Locker rooms . . . . . \_\_\_\_\_
- f. Physical education teachers' office . . . . . \_\_\_\_\_
- g. Access to bowling alleys in the community . . . . . \_\_\_\_\_
- h. Access to curling rink in the community . . . . . \_\_\_\_\_

## VI OUTDOOR FACILITIES

- a. Climbing apparatus . . . . . \_\_\_\_\_
- b. Running track . . . . . \_\_\_\_\_
- c. Playing field large enough for regulation  
football field . . . . . \_\_\_\_\_



DETAILED AREAS (continued)

(follow instructions Part B)

- d. Access to a skating rink . . . . . \_\_\_\_\_
  - 1. in the school complex . . . . . \_\_\_\_\_
  - OR 2. only in the community . . . . . \_\_\_\_\_
- e. Wading pool . . . . . \_\_\_\_\_
- f. Access to tennis courts . . . . . \_\_\_\_\_
  - 1. in the school complex . . . . . \_\_\_\_\_
  - OR 2. only in the community . . . . . \_\_\_\_\_
- g. Playground equipment . . . . . \_\_\_\_\_
  - 1. swings . . . . . \_\_\_\_\_
  - 2. slide . . . . . \_\_\_\_\_
  - 3. sand-box . . . . . \_\_\_\_\_
  - 4. merry-go-round . . . . . \_\_\_\_\_
  - 5. teeter-totter . . . . . \_\_\_\_\_
  - 6. tunnels . . . . . \_\_\_\_\_
  - 7. colorful equipment . . . . . \_\_\_\_\_

VII EQUIPMENT AND MATERIALS

- a. One ball per child per class in at least 2 sizes . . . \_\_\_\_\_
- b. One bean bag per child in a class . . . . . \_\_\_\_\_
- c. Plastic hoops . . . . . \_\_\_\_\_
- d. Skipping ropes . . . . . \_\_\_\_\_
- e. Pingminton bats . . . . . \_\_\_\_\_
- f. Climbing ropes and ladders . . . . . \_\_\_\_\_
- g. Floating toys for use in the pool . . . . . \_\_\_\_\_
- h. Weights for weight training . . . . . \_\_\_\_\_
- i. Gymnastic apparatus . . . . . \_\_\_\_\_
  - 1. trampoline . . . . . \_\_\_\_\_
  - 2. minimum of 20 ft. of 4 ft. wide tumb-  
ling mat per 10 students . . . . . \_\_\_\_\_
  - 3. box horse . . . . . \_\_\_\_\_
  - 4. balance beam . . . . . \_\_\_\_\_



## DETAILED AREA (continued)

(follow instructions Part B)

- i. 5. balance benches . . . . . \_\_\_\_\_
- 6. uneven and parallel bars . . . . . \_\_\_\_\_
- 7. rings . . . . . \_\_\_\_\_
- 8. springboard . . . . . \_\_\_\_\_
- j. Target-type equipment . . . . . \_\_\_\_\_
- k. Colored boxes of various sizes . . . . . \_\_\_\_\_
- l. Large tires . . . . . \_\_\_\_\_

## VIII INTRAMURAL PROGRAM

- a. Regular intramural programs are held after school hours . . . . . \_\_\_\_\_
- b. Student leadership opportunities are provided as follows . . . . . \_\_\_\_\_
  - 1. staff supervisor but student officials and team captains . . . . . \_\_\_\_\_
  - OR 2. staff supervisor and officials but student team captains . . . . . \_\_\_\_\_
- c. Trophies are awarded to league winners . . . . . \_\_\_\_\_
- d. Coeducational activities are included . . . . . \_\_\_\_\_
- e. Non-competitive recreational activities such as swimming or hiking are included. . . . . \_\_\_\_\_
- f. Some supervised "free play" is provided each day . . . . . \_\_\_\_\_

NEGATIVE:

- g. Competition is restricted to individual activities . . . . . \_\_\_\_\_

## IX ATHLETIC COMPETITION (EXTRA-SCHOOL COMPETITION)

- a. Competition is with teams or individuals from other schools for retarded children . . . . . \_\_\_\_\_
- b. Occasional competition is held for children twelve years and over . . . . . \_\_\_\_\_
- c. Regular leagues are participated in by children twelve years and over . . . . . \_\_\_\_\_



DETAILED AREA (continued)  
(follow instructions Part B)

- d. Competition for children twelve and over in . . . \_\_\_\_\_
- |                     |           |       |
|---------------------|-----------|-------|
| 1. wrestling (boys) | . . . . . | _____ |
| 2. floor hockey     | . . . . . | _____ |
| 3. curling          | . . . . . | _____ |
| 4. bowling          | . . . . . | _____ |
| 5. track and field  | . . . . . | _____ |
| 6. swimming         | . . . . . | _____ |
| 7. gymnastics       | . . . . . | _____ |
| 8. volleyball       | . . . . . | _____ |
| 9. basketball       | . . . . . | _____ |

NEGATIVE:

- e. Regular leagues are participated in by children  
under twelve years . . . . . \_\_\_\_\_





RAW SCORES FOR THIRD CHECKLIST

MAJOR AREAS												
Area	Jurors											Rounded-off Average
	1	2	3	4	5	6	7	8	9	10	11	
I	15	20	20	15	10	8	20	10	5	5	8	12
II	20	20	40	25	20	8	15	20	20	25	20	21
III	10	10	15	20	5	14	15	10	10	5	8	11
IV	15	10	5	15	10	16	10	15	15	20	12	13
V	10	10	5	5	10	12	10	10	10	10	12	9
VI	8	10	5	5	5	12	10	10	10	10	12	9
VII	15	10	5	5	15	12	12	10	15	10	14	11
VIII	5	8	5	5	20	13	8	10	5	10	8	9
IX	2	2	0	5	5	5	5	5	10	5	6	5



## DETAILED AREAS

Area & Item	JURORS											Average
	1	2	3	4	5	6	7	8	9	10	11	
Ia	13	18	20	20	20	20	20	15	20	25	15	18.7
b	13	18	20	2	5	10	15	10	10	10	15	12.5
c	10	0	10	1	10	13	10	10	10	0	10	7.6
d	13	18	20	20	10	13	10	15	10	20	15	14.9
e	13	18	6	20	10	16	15	15	10	15	10	13.5
f	11	18	6	6	10	6	15	5	10	10	10	9.7
g	9	10	6	7	10	8	10	10	10	10	10	9.1
h	10	0	6	-	10	10	5	5	10	0	5	6.1
i	8	0	6	6	18	9	5	10	10	10	10	8.4
j	13	100	50	-	-	15	50	-	5	20	10	32.9
IIa	20	45	19	75	30	20	13.3	20	20	20	10	26.6
-1	19	30	19	75	30	20	6.7	15	10	20	5	22.7
-2	19	30	19	18.8	10	6.7	6.7	10	10	13.3	7.5	13.7
-3	20	45	19	31.3	30	16	13.3	20	20	20	10	22.2
-4	8	30	2.4	-	10	5.3	6.7	10	10	20	2.5	10.5
b	20	15	19	0	15	15	26.7	12	15	15	20	15.7
c	8	8	19	5	15	5	13.3	12	14	10	10	10.8
d	20	8	19	15	15	15	13.3	15	14	10	20	14.9
e	15	8	14.4	0	10	10	13.3	8	13	10	10	10.2
f	4	8	10	0	10	10	13.3	10	12	10	10	8.8
g	10	4	5	0	5	15	3.4	13	8	15	5	7.6
h	3	4	5	5	0	10	3.4	10	4	10	15	6.3
IIIa	12	10	15	10	10	13.8	15	15	12	10	10	12.1
b	12	10	15	10	10	11.5	10	12	15	5	8	10.8
-1	12	10	15	-	10	2.9	5	10	15	2.5	5	8.7
-2	4.8	4.3	10	10	5	11.5	10	12	10	5	8	8.2
c	12	10	15	10	10	11.5	15	12	6	10	8	10.9
-1	12	0	15	-	10	2.9	-	10	6	-	2	7.2
-2	4.8	10	10	10	5	11.5	-	12	4	-	8	8.4



DETAILED AREAS (continued)

Area & Item	JURORS											Average
	1	2	3	4	5	6	7	8	9	10	11	
111d	12	10	15	10	10	5.8	10	10	7	5	8	9.3
e	10	5	15	10	10	11.5	5	10	8	5	10	9.0
f	7	15	15	0	10	9.2	10	6	12	5	15	9.5
g	8	5	5	10	10	13.8	5	10	8	10	5	8.2
h	9	10	5	0	10	5.8	10	10	6	10	5	7.3
i	8	15	5	30	10	3.3	5	5	20	10	15	11.5
j	10	10	5	10	10	13.8	15	10	6	20	16	11.4
k	12	60	5	-	-	13.8	20	-	5	10	10	16.9
1Va	11	15	15	10	4	15	16	15	15	20	15	13.4
-1	2	3	5	2	.6	4	4	3	3	5	1	3.0
-2	3	4	3	2	.8	3	4	3	3	5	4	3.2
-3	2	3	2	3	.8	2	3	2	3	3	4	2.5
-4	2	3	2	1	.8	2	2	3	1	4	4	2.3
-5	1	1	2	1	.6	1	1	3	3	2	1	1.4
-6	1	1	1	1	.2	3	2	1	2	1	1	1.3
b	12	13	15	10	21	10	15	12	10	20	15	13.9
c	12	13	10	10	25	10	10	9	10	10	5	11.3
d	12	0	10	10	0	10	10	9	5	3	10	7.2
e	12	0	15	10	10	10	10	9	5	2	10	8.5
f	6	13	10	10	10	10	10	10	10	10	10	9.9
g	9	10	0	10	5	5	2	5	10	5	5	6.0
h	5	10	0	10	10	10	2	12	5	0	5	6.3
i	12	13	12	10	10	10	15	12	15	10	15	12.5
-1	2.4	3	4	4	2	2	5	3	5	3	4	3.4
-2	2.4	3	2	2	2	2	3	2	2	3	4	2.5
-3	2.4	3	2	1	2	2	2	2	2	1	2	1.9
-4	2.4	4	2	2	2	2	2.5	2	4	2	4	2.6
-5	2.4	0	2	1	2	2	2.5	2	2	1	1	1.6



## DETAILED AREAS (continued)

Area & Item	JURORS											Average
	1	2	3	4	5	6	7	8	9	10	11	
IVj	9	13	13	10	5	10	10	10	15	20	10	11.4
-1	3	4	3	3	1.8	3	3	3	4	5	3	3.3
-2	3	4	4	3	1.8	3	3	3	5	10	4	4.0
-3	3	3	3	3	1.2	3	2	2	3	3	2	2.2
-4	0	2	3	1	.4	1	2	2	3	2	1	1.6
k	12	100	0	-	-	5	40	-	10	15	20	25.3
Va	15	10	15	20	30	20	5	10	25	20	15	16.8
b	15	20	25	20	10	15	15	20	15	10	15	16.5
c	15	20	15	10	30	15	15	20	20	20	20	18.2
-1	5	20	15	10	30	15	15	20	20	20	20	17.3
-2	15	6.7	10	10	0	10	7.5	6.6	13.3	15	6.7	9.2
d	12	10	5	10	10	10	15	12	10	5	15	10.4
e	12	10	5	10	10	10	15	12	10	10	10	10.4
f	8	10	15	10	10	10	15	11	10	5	5	9.9
g	15	10	10	10	10	15	10	10	5	15	10	10.0
h	8	10	10	10	10	15	10	5	5	15	10	8.0
VIa	18	16	15	25	20	15	20	13.6	10	15	15	16.4
b	16	16	10	20	20	10	15	13.6	10	25	15	15.4
c	16	16	10	10	20	20	5	13.6	20	25	20	16.0
d	18	16	25	15	10	10	15	18.2	20	20	10	16.1
-1	9	16	15	15	10	10	15	13.6	20	20	10	14.0
-2	18	9.6	25	15	0	6.7	15	18.2	13.3	13.3	4.3	12.6
e	10	16	10	0	10	5	20	13.6	10	2	10	9.7
f	4	10	10	15	10	10	5	9.2	15	10	10	9.8
-1	1	6.7	10	15	10	10	5	4.6	15	10	10	8.8
-2	4	10	5	15	0	6.7	3.3	9.2	10	5	4.3	6.6
g	18	16	20	15	10	30	20	20	15	3	20	17
-1	3	3	3	1	1.4	3	3	2.7	2	1	3	2.4





## DETAILED AREAS (continued)

Area & Item	JURORS											Average
	1	2	3	4	5	6	7	8	9	10	11	
g-2	3	3	3	1	1.4	2	4	2.7	2	1	3	2.4
-3	2	2	2	1	1.4	4	4	2.7	3	0	2	2.2
-4	2	2	3	1	1.4	3	1	1.8	1	0	2	1.7
-5	3	2	3	1	1.4	3	1	1.8	1	0	3	1.8
-6	3	2	2	5	1.4	5	3	2.7	3	0	3	2.7
-7	2	2	3	5	1.4	10	4	3.8	3	1	4	3.6
VII a	9	8	15	10	10	11	12.5	12	15	15	15	12.0
b	9	8	5	8	0	9	8.3	8	10	5	8	7.1
c	9	8	5	8	2	9	8.3	10	5	5	8	7.0
d	9	8	5	8	2	9	8.3	10	10	15	10	8.6
e	9	8	5	0	2	8	8.3	2	5	5	8	5.5
f	10	10	15	10	10	8	8.3	11	5	10	10	9.8
g	5	8	0	5	2	6	8.3	5	10	0	6	5.0
h	9	8	5	5	10	2	4.5	4	5	0	6	5.3
i	10	10	20	18	50	15	8.3	15	15	20	10	17.4
-1	.5	1	5	3	7.8	2	1.7	2	3	4	1	2.8
-2	2	2	3	3	7.8	2	.8	3	3	3	2	2.9
-3	1	2	2	3	7.8	2	1.7	2	1	2	1	2.3
-4	1	1	2	3	7.8	2	.8	1	2	2	1	2.1
-5	2	1	2	3	1.6	2	1.7	3	3	5	2	2.4
-6	2	1	2	1	7.8	1	.4	1	1	1	1	1.8
-7	1	1	2	1	1.6	1	.8	1	1	1	1	1.1
-8	.5	1	2	1	7.8	3	.4	2	1	2	1	2.0
j	5	8	10	8	5	9	8.3	8	10	10	10	8.3
k	10	8	10	10	2	7	8.3	10	5	10	8	8.0
l	6	8	5	10	5	7	8.3	5	5	5	1	5.9
VIII a	20	15	25	16	30	25	25	20	10	15	30	21.0
b	10	20	25	16	10	20	18.8	20	15	20	20	17.7



## DETAILED AREAS (continued)

Area & Item	JURORS											Average
	1	2	3	4	5	6	7	8	9	10	11	
b-1	7	20	25	5.3	5	16.7	18.8	10	15	20	20	17.4
-2	10	6.7	16.7	16	10	20	18.8	20	10	10	6.7	14.8
c	20	10	10	15	10	10	6.2	10	10	5	5	10.1
d	20	20	20	16	30	15	12.5	20	25	10	15	18.5
e	15	20	10	22	-	20	25	15	25	25	-	19.6
f	15	15	10	15	20	10	12.5	15	15	25	30	16.6
g	10	60	5	-	-	20	2.5	-	5	5	20	18.2
IXa	25	30	25	33	30	20	30	30	50	25	15	28.4
b	10	40	25	0	30	40	30	30	30	15	5	23.9
c	30	0	25	33	20	10	10	20	0	30	30	18.9
d	35	30	25	34	20	30	30	20	20	25	50	29.0
-1	4	2	0	3	2.7	4	2	1.2	2	1	5	2.4
-2	4	2	2	4	2.7	4	4	2.2	2	5	15	4.3
-3	3	4	5	4	1.3	2	2	1.2	2	1	5	2.8
-4	4	4	5	4	1.3	4	4	2.2	2	2	15	4.3
-5	4	4	2	6	2.7	4	4	3.3	2	3	15	4.6
-6	4	4	5	4	2.7	4	4	3.3	2	5	15	4.8
-7	4	4	2	4	2.7	3	2	2.2	4	1	5	3.1
-8	4	4	2	3	2.7	3	4	2.2	2	1	15	3.9
-9	4	2	2	2	1.3	2	4	2.2	2	1	5	2.5
c	8	100	0	-	-	30	100	-	10	2	0	31.3



## ADJUSTED PERCENT WEIGHTINGS USED

## IN SCHOOL QUESTIONNAIRE

The raw averages found in the third checklist were adjusted because of the deletion of several items. Items were deleted after they were found to be confusing to answer in the pre-survey trial. Negative items were also deleted because of inconsistency of weightings and failure of some jurors to weight them.

## DETAILED AREAS (Adjusted)

Area & Item	Percent	Area & Item	percent	Area & Item	Percent
Ia	20	IIIf	9	IVa-3	3
b	13	g	8	-4	2
c	9	h	6	-5	1
d	16			-6	1
e	14	IIIIa	14	b	14
f	11	b-1	12	c	11
g	10	2	11	d	7
h	7	c-1	10	e	0
i	Deleted	-2	12	f	10
j	Deleted	d	11	g	6
		e	10	h	6
IIa		f	11	i-1	3
-1	26	g	9	-2	3
-2	16	h	8	-3	2
-3	25	i	13	-4	3
-4	12	j	Deleted	-5	2
b	15	k	Deleted	j-1	3
c	11			-2	4
d	15	IVa-1	3	-3	2
e	10	-2	3		



DETAILED AREAS (Adjusted)  
(continued)

Area & Item	Percent	Area & Item	Percent	Area & Item	Percent
IVk	Deleted				
Va	17	g-5	2	l	6
b	17	-6	3	VIIla	20
c-1	18	-7	4	b-1	17
-2	10	VIIa	12	-2	14
d	10	b	7	c	10
e	10	c	7	d	18
f	10	d	9	e	19
g	10	e	6	f	16
h	8	f	10	g	Deleted
VIa	16	g	5	IXa	28
b	15	h	5	b	24
c	16	i-1	3	c	19
d-1	16	-2	3	d-1	2
-2	14	-3	2	-2	4
e	10	-4	2	-3	2
f-1	10	-5	2	-4	4
-2	8	-6	2	-5	4
g-1	2	-7	1	-6	4
-2	2	-8	2	-7	3
-3	2	j	8	-8	4
-4	2	k	8	-9	2
				e	Deleted





APPENDIX E  
PILOT STUDY QUESTIONNAIRE



SURVEY OF PHYSICAL EDUCATION PROGRAMS  
IN ALBERTA SCHOOLS FOR  
MENTALLY RETARDED CHILDREN

School Year: 1969-1970

Please answer all questions and return the completed questionnaire by February, 1970. Enclosed is a stamped, self-addressed envelope for your convenience.

Answer all questions by means of a check mark ( ), unless otherwise indicated.

For further information, please contact:

Mrs. B. Botsford  
#204, 10655 - 83 Ave.  
Edmonton 60, Alberta

by mail, or at 439-3851 (Edmonton).

---

GENERAL INFORMATION

a) Name of school.

\_\_\_\_\_

Address

\_\_\_\_\_

Telephone \_\_\_\_\_

b) Name and position of person completing questionnaire.

Name \_\_\_\_\_

Position \_\_\_\_\_



1. NATURE OF SCHOOL

- a) Entirely residential . . . . . \_\_\_\_\_  
Partly residential . . . . . \_\_\_\_\_  
Non-residential . . . . . \_\_\_\_\_
- b) Number of years school has been in operation.  
Less than one year . . . . . \_\_\_\_\_  
One to three years . . . . . \_\_\_\_\_  
Four to six years . . . . . \_\_\_\_\_  
Seven to ten years . . . . . \_\_\_\_\_  
More than ten years . . . . . \_\_\_\_\_
- c) School authority.  
Provincial government . . . . . \_\_\_\_\_  
Local school board . . . . . \_\_\_\_\_  
Local association . . . . . \_\_\_\_\_  
Other (specify) \_\_\_\_\_

2. DESCRITPION OF CHILDREN ATTENDING SCHOOL

- a) Number of children served.  

Age	Pre-school		6 - 11		12 - 18		19 - 21	
Sex	M	F	M	F	M	F	M	F
Number								
- b) Number of residential students \_\_\_\_\_  
Number of full-day students \_\_\_\_\_  
Number of half-day students \_\_\_\_\_  
Other (specify) \_\_\_\_\_



## 3. PHYSICAL EDUCATION PERSONNEL

a) Number of physical education instructors.

Sex                      Male                      Female

Number

b) Training of physical education instructor(s).

Number with university degree in:

Physical Education                      \_\_\_\_\_

Special Education                      \_\_\_\_\_

Education                      \_\_\_\_\_

Other (specify                      \_\_\_\_\_

Number with teacher certification                      \_\_\_\_\_

Number with other training (specify)                      \_\_\_\_\_

Number with previous experience teaching in  
normal schools                      \_\_\_\_\_c) Physical education instructors have in-service  
training at the schools                      \_\_\_\_\_

Yes                      No

d) Volunteers are used to assist in the physical  
education program.                      \_\_\_\_\_

Yes                      No

(If answer to above is yes, please specify training  
of volunteer.)e) A male physical education instructor is provided for  
boys twelve years and over.                      \_\_\_\_\_

Yes                      No

A female physical education instructor is provided  
for girls twelve years and over.                      \_\_\_\_\_

Yes                      No





## 4. FACILITIES AND EQUIPMENT

## a) Availability of facilities.

Facility	Within school complex	In Community	Other (specify)
<hr/>			
INDOOR			
Bowling alleys			
Curling rink			
Gymnasium			
Locker room (boys)			
Locker room (girls)			
P.E. instructors' office			
Playroom			
Girls' showers			
Boys' showers			
Swimming Pool			
OUTDOOR			
Playground (field)			
Skating rink			
Tennis courts			
Wading pool			
Other _____			
<hr/>			

## b) Amount and kind of equipment

Equipment	Number					
	0	1	2-5	6-10	11-15	16 +
INDOOR						
Balance beam						
Balance bench						
Balls						
Bean Bags						
Box horse (vaulting)						
Climbing boxes						
Climbing ropes						
Climbing ladders						
Inflatable toys for use in pool						
Kickboards for use in Pool						
Pingminton bats						
Plastic or cane hoops						
Skipping ropes						
Springboard (gym)						
Tires						
Trampoline						



## 4. b) Equipment continued.

Equipment	Number					
	0	1	2-5	6-10	11-15	16 or more

## INDOOR

Tumbling mats  
 (size \_\_\_\_\_)  
 Uneven or parallel  
 bars  
 Other \_\_\_\_\_

---

## OUTDOOR

Merry-go-round  
 Monkey bars  
 Sand box  
 Slide  
 Swings  
 Teeter-totter  
 Tunnels  
 Other \_\_\_\_\_

---

## 5. PROGRAM

- a) Percentage of children taking regular physical education instruction in the school.

% of total taking P.E.	Age Pre-school	6-11	12-18	19-21
---------------------------	-------------------	------	-------	-------

0 - 20  
 21 - 40  
 41 - 60  
 61 - 80  
 81 - 100

Nature of conditions or illness preventing other children from participating in physical education classes.

- b) Percentage of children having medical examination before beginning physical education program.

0-20%\_\_\_\_; 21-40%\_\_\_\_; 41-60%\_\_\_\_; 61-80%\_\_\_\_; 81-100%\_\_\_\_

- c) Number of physical education classes per week per child.

0\_\_\_\_; 1\_\_\_\_; 2\_\_\_\_; 3\_\_\_\_; 4\_\_\_\_; 5 or more \_\_\_\_\_



## 5. c) Program continued1

Number of minutes of physical education per class.

0-15 min.\_\_\_\_; 16-30 min.\_\_\_\_; 31-45 min.\_\_\_\_;

46 min. or more\_\_\_\_.

## d) Dress in indoor classes.

Girls wear slacks or shorts in physical education classes.

never\_\_\_\_; sometimes\_\_\_\_; often\_\_\_\_; always\_\_\_\_

Children wear barefeet or running shoes in the gym.

never\_\_\_\_; sometimes\_\_\_\_; often\_\_\_\_; always\_\_\_\_

## e) Records are kept from year to year recording the children's physical education progress.

                       
yes no

Records are kept from year to year recording the children's medical status.

                       
yes no

## f) Physical education classes of boys and girls are separated at approximately age twelve for:

all activities \_\_\_\_; most activities \_\_\_\_;

some activities \_\_\_\_; no activities \_\_\_\_.

## g) Number of students per physical education instructor in an average class: (ratio of teacher to children)

Activity	Age	Ratio
Dance	pre-school to 11	1:
	12 - 21	1:
Gymnastics	pre-school to 11	1:
	12 - 21	1:
Games and Sports	pre-school to 11	1:
	12 - 21	1:
Swimming	pre-school to 11	1:
	12 - 21	1:



## 5. g) Program (continued)

Activity	Age	Ratio
Other _____	pre-school to 11	1:
	12 - 21	1:

## h) Student leadership and planning during class in the form of:

Student squad leaders - never \_\_\_\_\_; sometimes \_\_\_\_\_;  
often \_\_\_\_\_; always \_\_\_\_\_.

Student selection of activities in class - never \_\_\_\_\_; sometimes \_\_\_\_\_;  
often \_\_\_\_\_; always \_\_\_\_\_.

## i) Physical education reference material:

C.A.R.C. Centennial Athletic Programme \_\_\_\_\_  
Curriculum developed at the school \_\_\_\_\_  
Textbook(s) \_\_\_\_\_  
(specify) \_\_\_\_\_

j) Which of the following activities are included in the school's Physical Education program this year?

ACTIVITY	PRE-SCHOOL	6 - 11	12 - 21
Basketball			
Bicycling			
Camping overnight			
Creative games			
Croquet			
Dance			
Fishing			
Fitness exercises			
Floor hockey			
Football			
Gymnastics			
Ice hockey			
Ice skating			
Individual activities			
Jumping activities			
Hiking			
Officiating of games			
Pair activities			





## 5. j) Program continued

ACTIVITY	PRE-SCHOOL	6 - 11	12 - 21
Posture exercises			
Relays			
Running			
Self-testing activities			
Softball			
Swimming			
Throwing activities			
Volleyball			
Walking activities			
Weight lifting			
Wrestling			
Other (specify)			
_____			
_____			

k) INTRAMURAL PROGRAM (sports or games among students of the school at times other than in the instructional program. No children or adults from the community compete in this program.)

1. Organized sports and games are held for the students:

At noon \_\_\_\_\_

After school hours \_\_\_\_\_

Other \_\_\_\_\_

At no time outside of the instructional program \_\_\_\_\_

2. Student leadership opportunities are provided as follows:

Staff supervisor but student officials and student team captains \_\_\_\_\_

Staff supervisor and officials but student team captains \_\_\_\_\_

Other (specify) \_\_\_\_\_



## 5. k) Intramural Program (continued)

## 2. (continued)

No student leadership opportunities are  
available \_\_\_\_\_

3. Trophies or other awards are presented to  
winners\_\_\_\_\_ yes\_\_\_\_\_ no4. Non-competitive activities of recreational value  
are included in this program:

never \_\_\_\_\_ sometimes \_\_\_\_\_ often \_\_\_\_\_ always \_\_\_\_\_

## 5. Some supervised "free play" is provided each day

never \_\_\_\_\_ sometimes \_\_\_\_\_ often \_\_\_\_\_ always \_\_\_\_\_

## 1) Competition with individuals outside the school.

(See following page).



1) Competition with individuals outside the school.

COMPETITION WITH:	COMPETITION	Wrestling	Floor Hockey	Curling	Bowling	Track & Field	Swimming	Other (specify)
Retarded children from other schools.	Occasional							
	Regular							
Normal children from other schools.	Occasional							
	Regular							
Adults in the community	Occasional							
	Regular							
Other (specify) _____ _____	Occasional							
	Regular							



APPENDIX F  
SCHOOL QUESTIONNAIRE





## LETTER TO SCHOOLS

#204, 10655 - 83 Ave.  
Edmonton, Alberta  
April 6, 1970

Dear Sir or Madam:

Enclosed is a questionnaire regarding the physical education program at your school. This questionnaire is the basis of a provincial survey of physical education programs for mentally retarded children in Alberta schools. The result of the survey should be an accurate picture of current practices in physical education for retarded children.

As the survey is the subject of my Master of Arts thesis at the University of Alberta, I would be grateful for your cooperation.

Total time involved in answering the questionnaire is less than one-half hour. Information provided should describe the program in your school for the academic year 1969-1970.

Because of the small number of schools involved in this survey, it is important that 100% of the questionnaires be returned in order that the results be meaningful. I hope that you will find the time to complete the questionnaire and return it by April 20, 1970.

Thank you in advance for your interest and assistance in this study. Summaries of the study results will be made available to every participating school.

Sincerely,

Mrs. B. Botsford



FOLLOW-UP LETTER  
TO SCHOOLS

#204, 10655 - 83 Ave.  
Edmonton, Alberta  
April 30, 1970

Dear Sir or Madam:

I am writing to you in reference to my letter of April 6, 1970 regarding a provincial survey of physical education programs in Alberta schools for mentally retarded children.

I am at present trying to process the questionnaire returns, and would appreciate your cooperation in returning the questionnaire in the near future.

Thank you for your assistance.

Sincerely,

Mrs. B. Botsford



SURVEY OF PHYSICAL EDUCATION PROGRAMS  
IN ALBERTA SCHOOLS FOR  
MENTALLY RETARDED CHILDREN

School Year: 1969-1970

Please answer all questions and return the completed questionnaire by April 20, 1970. Enclosed is a stamped, self-addressed envelope for your convenience.

Answer all questions by means of a check mark (✓), unless otherwise indicated.

Definition of physical education class - regular instructional period of sports, games, dance, gymnastics, or swimming.

For further information, please contact:

Mrs. B. Botsford  
#204, 10655 - 83 Ave.  
Edmonton 60, Alberta

by mail, or at 439-3851 (Edmonton).

GENERAL INFORMATION

a) Name of school: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone: \_\_\_\_\_

b) Person completing questionnaire.

Name: \_\_\_\_\_

Position: \_\_\_\_\_

1. NATURE OF SCHOOL

a) Entirely residential . . . . . \_\_\_\_\_

Partly residential . . . . . \_\_\_\_\_



1. NATURE OF SCHOOL (continued)

Non-residential . . . . . \_\_\_\_\_

b) Number of years school has been in operation.

Less than one year . . . . . \_\_\_\_\_

One year to three years, twelve months . . . . . \_\_\_\_\_

Four years to six years, twelve months . . . . . \_\_\_\_\_

Seven years to ten years . . . . . \_\_\_\_\_

More than ten years . . . . . \_\_\_\_\_

c) School authority.

Provincial government . . . . . \_\_\_\_\_

Local school board . . . . . \_\_\_\_\_

Local association . . . . . \_\_\_\_\_

Other (specify) \_\_\_\_\_

2. DESCRIPTION OF CHILDREN ATTENDING SCHOOL

a) Number of children served.

Age	Pre-school		6 - 11		12 - 18		19 - 21	
Sex	M	F	M	F	M	F	M	F
Number								

b) Total number of residential students \_\_\_\_\_

Total number of full-day students  
(non-residential) \_\_\_\_\_

Total number of half-day students \_\_\_\_\_

Total number of other students (specify)  
\_\_\_\_\_

3. PHYSICAL EDUCATION PERSONNEL

a) Number of persons teaching physical education.





## 3. PHYSICAL EDUCATION PERSONNEL (continued)

	Male	Female
Number of full-time P.E. Teachers		
Number of regular classroom teachers teaching P.E.		

## b) Training of physical education instructor(s)

Number with:	Full-time P.E. teacher	Regular Classroom teacher
University degree in P.E.		
University degree in Special Education		
University degree in Adapted P.E.		
University degree in Education		
University degree in other area (specify)		
Other training (specify)		
Alberta teacher certifi- cation from the A. T. A.		
Previous experience teaching in normal schools		

- c) Number of P.E. instructors having student teaching experience with mentally retarded children prior to teaching on a permanent basis. \_\_\_\_\_

Physical education instructors have in-service training at the school.

\_\_\_\_\_

yes

\_\_\_\_\_

no

- d) Volunteers are used to assist in the physical education program.

\_\_\_\_\_

yes

\_\_\_\_\_

no



3. PHYSICAL EDUCATION PERSONNEL (continued)

(If answer to "d" is yes, please specify training of volunteer(s)).

- e) Part-time paid staff with at least grade ten schooling but no formal training are hired to assist regular instructors.

                            
yes                  no

- f) A male physical education instructor is provided for boys twelve years and over.

                            
yes                  no

A female physical education instructor is provided for girls twelve years and over.

                            
yes                  no

4. FACILITIES AND EQUIPMENT

- a) Which of the following facilities are used in the physical education program?

Facility	Within school complex	In community	Other (specify)
Bowling alleys			
Curling rink			
Gymnasium			
Locker room (boys)			
Locker room (girls)			
P.E. instructor's office			
Playroom			
Showers (boys)			
Showers (girls)			
Swimming pool			



4. FACILITIES AND EQUIPMENT (continued)

Facility	Within school complex	In community	Other (specify)
Playground (field)			
Skating rink			
Tennis courts			
Wading pool			
Other (specify)			
_____			
_____			

b) Approximate size of playground (if any)

c) Approximate size of gymnasium (if any):

60' by 30' or larger

yesno

d) The gymnasium has partitions which can divide the gymnasium into two or more teaching stations.

yesno

e) Amount and kind of equipment.

Indoor equipment:

Equipment	Number					
	0	1	2 - 5	6 - 10	11 - 15	16+
Balance beam						
Balance bench						
Balls (# of sizes _____)						
Bean bags						
Box horse (vault)						
Climbing boxes						



4. FACILITIES AND EQUIPMENT (continued)

Equipment	Number				
	0	1	2 - 5	6 - 10	11 - 15 16+
Climbing ropes					
Climbing ladders					
Inflatable toys for use in pool					
Kick-boards for use in pool					
Pingminton bats					
Plastic or cane hoops					
Skipping ropes					
Springboard (gym)					
Tires					
Trampoline					
Tumbling mats (size _____)					
Uneven or paral- lel bars					
Weights					
Others (specify)					
_____					
_____					
_____					
<u>Outdoor equipment:</u>					
Merry-go-round					
Monkey bars					
Sand-box					
Slide					





4. FACILITIES AND EQUIPMENT (continued)

Outdoor Equipment	Number					
	0	1	2 - 5	6 - 10	11 - 15	16+
Swings						
Teeter-totter						
Tunnels						
Colorful Equipment (Describe)						
<hr/>						
<hr/>						
Other (specify)						
<hr/>						
<hr/>						
<hr/>						

5. PROGRAM

- a) Percentage of children enrolled in regular physical education instructional classes in the school.

% of total taking P.E.	Age			
	Pre-school	6 - 11	12 - 18	19 - 21
0 - 20				
21 - 40				
41 - 60				
61 - 80				
81 - 100				

Nature of conditions or illness preventing other children from participating in physical education classes:

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5. PROGRAM (continued)

- b) Non-ambulatory students (ie. on crutches, wheelchairs, stretchers etc.) are placed in separate special P. E. classes.

                            
yes                  no

- c) Percentage of children having medical examination before beginning physical education program each year.

0-20%       ; 21-40%       ; 41-60%       ; 61-80%        81-100%       

- d) Number of times each physical education class meets each week.

0       ; 1       ; 2       ; 3       ; 4       ; 5 or more       .

Number of minutes of physical education instruction per class period.

0-15       ; 16-20       ; 21-25       ; 26-30       ; 31-35       ;  
36-45       ; 46 min. or more       .

- e) Dress in indoor physical education classes.

Girls change into slacks or shorts for P.E. classes:

never       ; sometimes       ; often       ; always       .

Children wear barefeet or running shoes in the gym:

never       ; sometimes       ; often       ; always       .

- f) Number of children per class of P.E. (average number):

0-5       ; 6-8       ; 9-12       ; 13-16       ; 17-20       ;  
more than 20       .

- g. Records are kept from year to year recording the children's physical education progress.

                            
yes                  no

Records are kept from year to year recording the children's medical status.

                            
yes                  no



## 5. PROGRAM (continued)

- h) Physical education classes contain both boys and girls together up to the age of 12 years.

                          
yes            no

Physical education classes of boys and girls are separated at approximately age twelve for:

all activities\_\_\_\_;            most activities \_\_\_\_;

some activities \_\_\_\_;            no activities \_\_\_\_.

- i) Number of students per physical education instructor in an average P.E. class (ratio of teacher to children):

Activity	Age of children	Ratio
Dance	pre-school to 11 years	1:
	12 - 21 years	1:
Gymnastics	pre-school to 11 years	1:
	12 - 21 years	1:
Games and Sports	pre-school to 11 years	1:
	12 - 21 years	1:
Swimming	pre-school to 11 years	1:
	12 - 21 years	1:
Other (specify) _____	pre-school to 11 years	1:
	12 - 21 years	1:
_____		

- j) Fitness testing of all students is completed:

never\_\_\_\_;    once per year\_\_\_\_;    twice a year\_\_\_\_.

- k) Student leadership and planning during class in the form of the following is included in P.E. classes:

Student squad leaders - never\_\_\_\_;    sometimes\_\_\_\_;

often\_\_\_\_;    always\_\_\_\_.



5. PROGRAM (continued)

k) continued

Student selection of activities in class:

never\_\_\_; sometimes\_\_\_; often\_\_\_; always\_\_\_.

Problem-solving activities are included:

never\_\_\_; sometimes\_\_\_; often\_\_\_; always\_\_\_.

l) Audio-visual aids are used in physical education classes:

never\_\_\_; often\_\_\_; sometimes\_\_\_; always\_\_\_.

m) Physical education reference material:

C.A.R.C. Centennial Athletic Programme \_\_\_\_\_

Curriculum developed at the school \_\_\_\_\_

Textbook(s) \_\_\_\_\_  
(specify) \_\_\_\_\_

Other (specify) \_\_\_\_\_

n) Which of the following activities are taught in the school's physical education instructional program this year?

Activity	Pre-school	6-11	12-21
Basketball			
Bicycling			
Camping overnight			
Creative games			
Dance and rhythmics			
Fishing			
Fitness exercises			
Floor hockey			
Group competitions			
Gymnastics and tumbling			
Ice hockey			
Ice skating			
Individual activities			









6. INTRAMURAL PROGRAM (continued)

b) Organized sports and games are held for the students:

At noon\_\_\_\_; After school hours\_\_\_\_; Other\_\_\_\_.

(If "other", please explain. \_\_\_\_\_)

c) Student leadership opportunities are provided as follows:

Staff supervisor but student officials and student team captains . . . . . \_\_\_\_\_

Staff supervisor and officials but student team captains . . . . . \_\_\_\_\_

Other (specify) \_\_\_\_\_

No student leadership opportunities are available \_\_\_\_\_

d) Coeducational activities are included (boys and girls mixed):

never\_\_\_\_; sometimes\_\_\_\_; often\_\_\_\_; always\_\_\_\_.

e) Trophies or other awards are presented to winners:

\_\_\_\_\_  
yes no

\*f) Non-competitive activities of recreational value are included in your program:

\_\_\_\_\_  
yes no

(If "yes", please outline activities \_\_\_\_\_)

\*g) Some supervised "free play" is provided each day:

never\_\_\_\_; sometimes\_\_\_\_; often\_\_\_\_; always\_\_\_\_.

7. EXTRA-MURAL PROGRAM (sports or games in which students from the school compete with individuals other than themselves).

a) Do your students compete at any time with individuals from outside the school, or with adult staff from the school?

\_\_\_\_\_  
yes no



7. EXTRA-MURAL PROGRAM (continued).

If "yes", please complete the following chart.

If "no", please go on to the last page.

- b) Extra-mural competition. (Please fill in the activities competed in in the columns under \*Activity, and complete the rest of the chart.)

Compete with:	Type of Competition	Age of Students	*Activity
Retarded children from other schools.	Occasional	6 - 11	
		12 - 21	
	Regular	6 - 11	
		12 - 21	
Normal children from other schools.	Occasional	6 - 11	
		12 - 21	
	Regular	6 - 11	
		12 - 21	
Adult staff from your school.	Occasional	6 - 11	
		12 - 21	
	Regular	6 - 11	
		12 - 21	
Adults from the community.	Occasional	6 - 11	
		12 - 21	
	Regular	6 - 11	
		12 - 21	
Other (specify).	Occasional	6 - 11	
		12 - 21	
	Regular	6 - 11	
		12 - 21	
_____			
_____			
_____			

8. WITH REGARD TO THE PHYSICAL EDUCATION PROGRAM AS A WHOLE.

- a) Indicate the strongest or BEST part of your program.



8. WITH REGARD TO THE PHYSICAL EDUCATION PROGRAM AS A WHOLE.  
(continued)

Indicate the weakest or WORST part of your program.

- b) Any additional comments which apply to the present, past or future program or facilities at your school would be greatly appreciated.

Thank you for your time and assistance in this project.





## RAW SCORES OF SCHOOL QUESTIONNAIRE

Area	Item	Number of Schools
1.	a) Entirely residential	1
	Partly residential	1
	Non-residential	14
	b) Less than one year	2
	One to three years	0
	Four to six years	5
	Seven to ten years	2
	More than ten years	7
	c) Provincial government	1
	Local school board	2
	Local association	13
	Other	0
2.	a) Number of children served	Incomplete information
	b) Less than 10 students	3
	Ten to 19 students	2
	Twenty to 29 students	2
	Thirty to 39 students	2
	Forty to 49 students	2
	Fifty to 69 students	1
	Seventy to 99 students	1
	One hundred to 199 students	1
	Two hundred to 299 students	0
	Three hundred to 399 students	0
	Four hundred to 499 students	1
	More than 500 students	1



## SCHOOL QUESTIONNAIRE (Continued)

- The following raw scores were based on information reported in the school questionnaire and measured by the third check-list percent weightings.
- Items "a" and "c" were combined where Item "c" was not applicable.

---

 ie.

SCHOOL	AREA	ITEM								Total
		a	b	c	d	e	f	g	h	
1.	I	29	0	N/A	8	14	0	0	0	51
2.		29	-	N/A	0	14	0	5	-	48
3.		29	0	N/A	8	14	5.5	5	0	61.5
4.		20	13	0	8	14	11	10	0	76
5.		29	0	N/A	8	14	11	10	7	79
6.		29	0	N/A	8	14	5.5	5	0	61.5
7.		29	0	N/A	0	14	5.5	0	-	53.5
8.		29	-	N/A	0	14	0	10	0	53
9.		29	0	N/A	0	14	11	5	0	59
10.		20	0	0	0	14	5.5	5	0	44.5
11.		29	0	N/A	8	14	11	5	0	67
12.		20	0	9	8	14	11	0	0	57
13.		29	0	N/A	0	14	11	5	7	66
14.		29	-	N/A	0	14	5.5	5	7	60.5
15.		0	13	9	8	14	11	10	7	72
16.		29	13	N/A	0	14	11	10	0	77
1.	II	12	0	11	0	0	9	0	0	32
2.		26	-	11	0	0	9	0	-	36
3.		0	0	0	0	0	9	0	0	9
4.		0	0	0	0	0	9	8	0	17
5.		0	0	0	0	0	9	8	0	17
6.		0	-	11	0	0	9	0	0	20
7.		0	-	0	0	0	9	8	0	17



## SCHOOL QUESTIONNAIRE (continued)

SCHOOL	AREA										Total
		a	b	c	d	r	f	g	h	i	
8.	11	12	15	11	15	0	9	8	6		76
9.		0	15	0	15	0	9	8	0		47
10.		12	0	11	0	0	9	0	0		32
11.		0	-	11	0	0	9	8	0		28
12.		0	15	0	15	10	0	8	0		48
13.		0	-	0	15	10	0	8	0		33
14.		0	-	0	-	0	9	8	0		17
15.		0	15	0	15	10	9	8	0		57
16.		0	15	11	15	0	9	8	0		58
1.	111	14	11	-	-	0	0	0	8	0	33
2.		14	11	-	-	10	-	0	8	-	43
3.		14	11	12	11	10	5.5	0	8	0	71.5
4.		14	11	12	11	-	5.5	0	8	13	74.5
5.		-	12	-	-	10	0	9	8	0	39
6.		0	0	0	0	10	0	-	8	13	31
7.		14	12	10	11	10	0	0	8	0	65
8.		0	0	0	0	10	5.5	0	8	13	36.5
9.		0	12	0	0	10	11	0	0	0	33
10.		14	11	-	-	10	0	0	8	0	43
11.		0	0	10	11	10	0	0	8	0	39
12.		0	0	0	0	10	0	0	8	0	18
13.		0	12	0	11	10	0	0	8	13	54
14.		-	-	-	-	10	-	0	8	-	18
15.		0	0	0	0	0	11	0	8	13	32
16.		14	11	-	-	10	0	0	8	0	43



## SCHOOL QUESTIONNAIRE (continued)

SCHOOL	AREA	a1	2	3	4	5	6	b	c	d	e	f	cont.
1.	IV	0	3	0	2	0	0	0	11	0	0	0	
2.		3	0	0	0	0	1	0	0	7	9	10	
3.		3	3	0	0	0	0	14	11	0	9	10	
4.		0	3	0	0	0	0	14	0	0	9	0	
5.		3	3	0	0	0	0	0	11	7	9	10	
6.		3	3	0	0	0	0	14	11	7	9	10	
7.		3	0	0	0	0	0	14	11	7	9	10	
8.		3	3	0	2	0	0	14	11	7	9	10	
9.		0	3	3	0	0	0	14	11	7	9	10	
10.		0	0	0	2	0	0	0	11	0	9	10	
11.		3	3	0	2	0	0	14	11	7	9	10	
12.		3	3	0	0	0	0	14	11	7	9	10	
13.		3	3	3	2	1	0	14	0	7	9	10	
14.		3	0	0	0	0	0	14	11	7	9	10	
15.		3	3	3	2	1	1	14	11	7	9	10	
16.		0	0	0	2	0	1	14	11	7	9	0	
		g	h	i1	2	3	4	5	j1	2	3	4	Total
1.	IV	0	0	3	0	0	0	0	0	2	0	0	21
2.	cont.	0	0	3	3	2	3	2	3	4	0	0	52
3.		0	0	0	0	0	0	0	0	0	0	0	50
4.		0	0	3	0	0	0	0	3	0	0	0	32
5.		0	0	3	0	2	0	0	3	4	0	0	55
6.		0	0	3	3	2	0	2	3	4	2	0	76
7.		0	0	3	3	0	3	2	3	2	2	0	72
8.		6	0	3	0	2	3	2	3	4	2	0	84
9.		0	0	3	3	2	0	0	3	2	2	0	72
10.		0	0	3	0	0	0	2	0	2	0	0	39
11.		0	0	3	0	0	3	0	3	2	2	0	72
12.		6	0	3	0	0	3	2	3	2	2	0	78





## SCHOOL QUESTIONNAIRE (continued)

SCHOOL	AREA	g	h	i	1	2	3	4	5	j	1	2	3	4	Total
13.	IV	0	0	3	3	2	3	2	3	3	4	2	2	2	76
14.		0	0	3	0	2	3	2	3	3	4	2	0	0	73
15.		0	6	3	3	2	3	2	3	3	4	2	0	0	94
16.		0	0	3	3	2	3	2	3	3	4	2	0	0	64

		a	b	c	d	e	f	g	h	Total
1.	V.	0	0	0	0	0	0	0	0	0
2.		0	0	0	0	0	0	10	0	10
3.		0	0	10	0	0	0	0	0	10
4.		0	0	10	0	0	0	0	0	10
5.		17	0	0	0	0	0	0	0	17
6.		17	0	10	10	0	0	0	0	37
7.		0	0	10	0	0	0	0	0	10
8.		0	17	10	0	0	0	0	0	27
9.		0	0	10	10	0	0	10	0	37
10.		0	0	0	0	0	0	0	0	0
11.		17	0	10	0	0	0	0	0	27
12.		17	0	10	0	0	0	0	0	27
13.		17	17	10	0	10	10	10	0	74
14.		17	0	10	0	0	0	0	0	27
15.		17	17	10	10	0	10	10	8	82
16.		17	0	18	10	10	10	10	0	75



## SCHOOL QUESTIONNAIRE (continued)

SCHOOL	AREA	a	b	c	d	e	f	g	1	2	3	4	5	6	7	Total
1.	VI	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3
2.		0	0	0	0	0	0	2	2	2	-	2	2	0	0	8
3.		0	0	-	14	0	0	0	2	2	0	0	0	0	0	18
4.		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5.		0	0	0	14	0	0	0	0	0	0	0	0	0	0	14
6.		0	0	16	16	0	0	0	0	0	0	0	0	0	0	32
7.		0	0	0	14	0	0	2	2	2	0	2	2	3	0	25
8.		16	0	-	14	0	0	2	2	0	2	2	2	0	0	38
9.		0	0	0	14	0	0	2	2	0	2	0	0	3	0	23
10.		0	0	0	0	0	0	2	2	2	0	2	2	0	0	8
11.		16	0	16	16	0	0	2	2	2	0	2	2	3	4	63
12.		16	0	0	14	0	0	2	2	0	2	0	0	0	0	36
13.		0	0	16	14	0	0	2	2	2	0	0	0	0	0	36
14.		16	0	16	14	0	0	2	2	0	0	0	0	0	0	50
15.		16	0	16	16	10	10	2	2	2	2	2	2	0	0	78
16.		16	0	16	14	0	0	2	2	0	0	2	2	0	4	56

		a	b	c	d	e	f	g	h	i	1	2	3	4	5	6	7
1.	VII	12	7	0	9	0	0	0	0	0	0	3	0	0	0	0	0
2.		0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0
3.		6	7	0	9	0	0	5	0	0	0	3	0	0	2	0	0
4.		6	7	7	0	0	0	5	0	0	0	0	0	0	0	0	0
5.		6	7	0	0	0	10	0	0	0	0	0	0	2	0	0	0
6.		12	7	7	9	0	0	0	0	0	0	3	2	2	2	0	0
7.		12	7	7	9	0	0	0	0	0	0	3	0	2	2	0	0
8.		6	0	0	9	0	0	5	0	0	0	3	0	2	2	2	0
9.		12	7	7	9	0	5	5	0	0	0	0	2	2	2	0	0
10.		12	7	7	9	0	0	0	0	0	0	3	0	2	2	0	0
11.		6	0	7	9	0	0	0	0	0	0	0	0	2	0	0	0
12.		12	7	7	0	6	10	0	0	0	0	3	0	2	2	2	0



SCHOOL	AREA	1960-61															
		a	b	c	d	e	f	g	h	i	1	2	3	4	5	6	7
13.	VII	6	7	7	9	6	0	0	0	0	0	0	0	0	0	0	0
14.		6	7	7	0	0	0	0	0	0	0	0	0	2	0	0	0
15.		6	7	0	9	6	10	5	5	0	3	2	0	0	2	0	0
16..		12	7	7	9	0	0	5	0	3	3	0	2	2	0	0	0

	8	j	k	l	Total
1. VII	0	0	0	0	31
2. (cont.)	0	0	0	0	9
3.	0	0	0	6	38
4.	0	0	0	6	31
5.	0	0	0	0	25
6.	2	0	8	0	54
7.	0	0	0	6	48
8.	0	0	0	0	29
9.	2	0	0	0	53
10.	0	0	8	0	50
11.	0	0	0	0	24
12.	0	0	8	6	55
13.	0	0	0	6	41
14.	0	0	0	0	22
15.	2	0	8	0	65
16.	0	0	0	6	56

		a	b	c	d	e	f	Total
1.	VIII	0	0	0	0	0	-	0
2.		0	0	0	0	0	16	16
3.		0	0	0	0	0	16	16
4.		0	0	0	18	19	17	53
5.		0	17	0	0	19	16	52
6.		0	0	0	0	0	16	16
7.		0	0	0	0	19	16	35



## SCHOOL QUESTIONNAIRE (continued)

SCHOOL	AREA	a	b	c	d	e	f							Total
8.	VIII	0	0	0	0	19	16							35
9.		0	14	0	18	19	16							67
10.		0	0	0	0	19	16							35
11.		0	0	0	0	19	16							35
12.		0	0	0	0	19	16							35
13.		20	0	10	18	19	16							83
14.		0	0	10	0	19	16							45
15.		20	17	10	18	19	16							100
16.		0	17	10	0	19	16							62
		a	b	c	d1	2	3	4	5	6	7	8	9	Total
1.	IX	0	0	0	0	0	0	0	0	0	0	0	0	0
2.		28	24	0	0	0	0	0	4	0	0	0	0	56
3.		0	0	0	0	0	0	0	0	0	0	0	0	0
4.		0	0	0	0	0	0	0	0	0	0	0	0	0
5.		0	0	0	0	0	0	0	0	0	0	0	0	0
6.		28	24	0	0	0	0	0	0	0	0	0	0	52
7.		0	0	0	0	0	0	0	0	0	0	0	0	0
8.		0	24	0	0	0	0	0	4	0	0	0	0	28
9.		0	0	0	0	0	0	0	0	0	0	0	0	0
10.		0	0	0	0	0	0	0	0	0	0	0	0	0
11.		28	24	0	0	0	0	0	0	0	0	0	0	52
12.		28	24	0	0	0	0	0	4	4	0	0	0	60
13.		28	24	0	0	4	0	0	4	4	0	0	0	64
14.		28	24	0	0	0	0	0	0	0	0	0	0	52
15.		28	24	0	0	0	0	0	0	4	0	0	0	56
16.		28	24	0	0	0	0	0	4	4	0	0	0	60











**B29950**